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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 1.

SAN FRANCISCO, SATURDAY, JULY 6, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### The Subterranean Reservoir.

On another page of this issue we give a second chapter of the investigations of the Arizona Experiment Station into the effects of winter irrigation which are directly applicable to a large area of California, and will be found instructive to our fruit growers who are operating in such regions. Last week we gave the portions relating particularly to the visible effects upon the growth and fruiting of the trees under observation, and this week the discussion is of the actual moisture content of the soil upon which the growth was produced. The whole matter is illustrative first of the widely prevailing methods of present experimenters with agricultural subjects. They are properly not content with the visible results, but pursue the subject in to ascertainment of the actual conditions of affairs which are far out of common sight and yet afford most satisfactory information of the facts which are of the greatest importance to know. The investigations of Prof. McClatchie of Arizona on this line should win him the wide respect and thanks of fruit growers.

The engravings on this page will assist the reader to appreciate the data given on later pages of this issue. The apricot tree shows by its size and thrift that it is willing to take its support from the water supply stored in the subterranean reservoir by winter irrigation. That is clear without further comment. As we have previously noted, the tree declares its own comfort and content and uses a sign language which all observing growers should endeavor to understand. The other picture in diagram form has to deal rather with subterranean conditions

which are out of sight. If one will study this picture of the root penetration of fruit trees which are growing in the deep soils of the arid region he will not only understand better the data in Prof. McClatchie's discussion but he will get new realization of the mass of soil which a tree can use. It used to be said that the root extension of a tree was equal to the spread of its branches until investigation showed that it was very much greater. Depth of root penetration is of course conditioned upon subsoil conditions, and it seems fair to conclude from recent investigation that when the soil is permeable and moisture conditions favor deep rooting the vertical penetration may be as great as the upward reach of its branches—at least with our fruit trees which are prevented from pruning from too great soaring. This conception of a fruit tree on a deep soil is an important matter in the arid region and explains the reason why our trees in good places are drouth resistant and are able to carry fruit crops and late growth of foliage during months of dry skies when trees on shallow soils would suffer unless frequent showers or irrigation carry them along. This is nothing new but the old observation becomes more impressive when a diagram like that on this page, drawn from actual introspection of the soil, is presented to the mind. How much moisture can be stored in such a soil, with exact statements for the different depths thereof, may be found in the statement by Prof. McClatchie on a later page.

There is just now greater interest than ever in subsoil studies, as demonstrating available moisture at different depths. We have already given the results of investigations by the University of California in the case of deep rooting of orange and other trees. These also showed the fact that disaster comes to trees, even when they grow upon such deep soils, if they are not allowed to carry the moisture of which they are capable. This moisture may be lost in part by evaporation when cultivation for moisture retention has not been deep or thorough enough. It may be lost in part, also, by drainage when the sinking of the ground-water allows the water to retire beyond the reach of the roots by percolation. How far one or both of these courses of water is now acting for the unthrift of our trees and vines is probably not yet fully appreciated though we have had during the last three years very sharp hints of it. On another page of this issue there is an account of an appalling loss of vines in the Santa Clara valley, in which the failure of subterranean moisture supply is conceived by some local observers to be a prime cause of the trouble. This is not yet demonstrated, but is now being subjected to this test, for Prof. Hilgard has an expert in the region now pursuing systematic investigation into the moisture conditions of



Winter Irrigated Apricot Tree at the Arizona Station.

the subsoil at different depths. The results of this timely inquiry will come later. Meantime the data which we give in this issue should receive careful attention by all who are interested. The data in this case is, of course, derived from a winter irrigation of a deep soil; but winter irrigation is strictly comparable to rainfall, and we can readily infer what would be the result in the growth of these trees if the irrigation were withheld, just as we can see the probable result when the winter rainfall is for several years scant, so that only enough is received to moisten the upper levels of the available soil while the lower become dry.

Whatever the farther investigation of the failure of the vines in Santa Clara may disclose of the cause thereof, the conception of the needs of the tree or vine in the filling of its subterranean reservoir of permeable soil will prove of lasting value. Our trees are older than they were. They may have been able to go through their younger years with less soil water. They are now in the height of their requirements and they have reached a series of drier years than has been encountered since fruit growing became a large concern of this State. If it should prove that loss may result from subsoil drouth under present circumstances, the remedy for it must be ascertained and applied. Prof. McClatchie's investigations show that with the amount of winter irrigation he applied there was a net gain of moisture in the lower levels which might possibly under certain conditions become undesirable. The lessons of the whole matter are, first, the need of irrigation if rainfall is inadequate; second, the feasibility with certain trees or certain soils of winter irrigation, or at least the chief application of water during the winter season; third, the feasibility under certain conditions of too free use of water even in winter irrigation. All these points and others which readily appear from contemplation of them are of the most pressing moment.

F. N. Woods has been elected to the presidency of the California Cured Fruit Association to succeed Judge H. G. Bond, who resigned on account of ill health on Thursday last. President Woods has been one of the warmest supporters of the Association since its organization. He has been a prominent figure in the business world of the State for many years. Since his retirement from business he has devoted himself to fruit growing on a large scale. H. W. Meek also resigned the office of first vice-president and assigned pressure of private business. L. F. Graham was elected first vice-president.

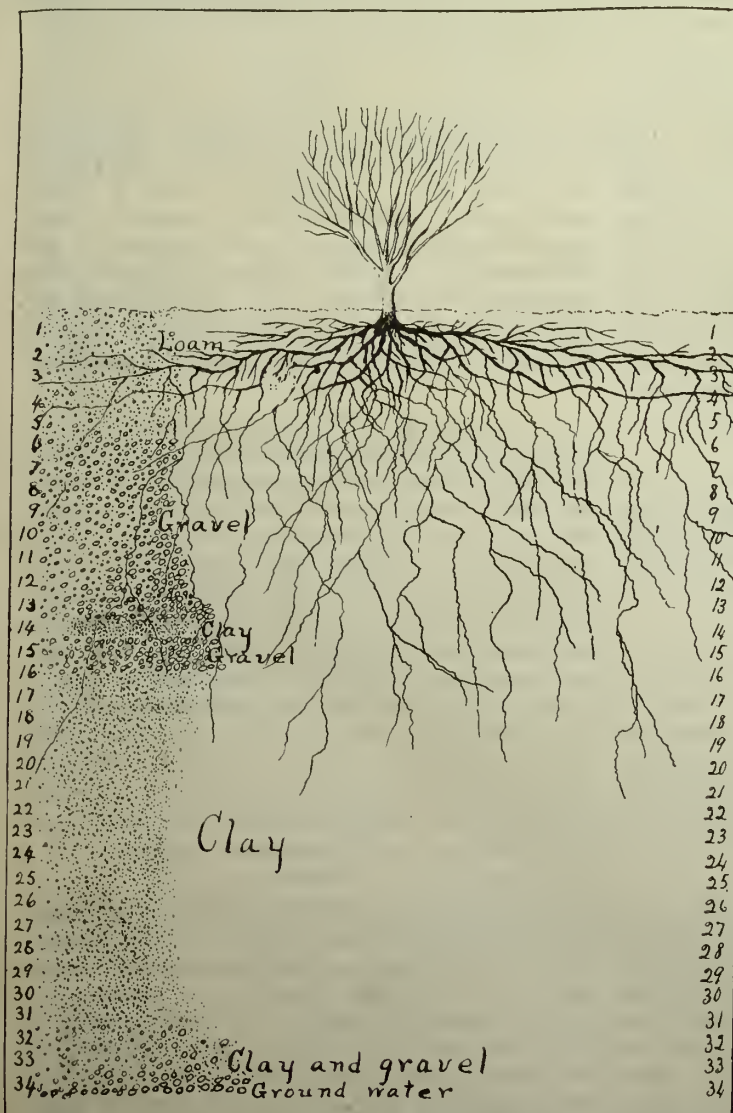


Diagram Showing Different Soil Strata in Winter Irrigated Orchard, and Root System of One of the Trees. Scale: 1 Inch to 8 Feet.

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E. J. WICKSON.....Horticultural Editor.

San Francisco, July 6, 1901.

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## The Week.

It is national holiday week and the city is full of intimations of Uncle Sam's new life, which will help the youth to enjoy the sensation of swelling and fluttering hearts to its fullest depth. A few days ago there were three great battleships and an armored cruiser in line along the city front and transports in great quantity. The streets have been thronged with soldiers returning to their homes in all parts of the country, from duty successfully discharged in Asia. Even the powerful suggestiveness of the fire-cracker is this year excelled by the local inklings of the pomp and circumstance of glorious war, and the youth moves in silent contemplation, forgetful of punks and explosions. Whatever the elders may think of imperialism and what not, and however distrustful they may be of manifest destiny, the boy of the day counts the American achievements of the recent past the greatest things on earth, and his Fourth of July this year will be almost too full for utterance. He will even fail to notice, perhaps, that the PACIFIC RURAL PRESS comes one day ahead of time this week, because of the need of having a day for the printers' jubilation. The holiday already clouds the markets and gives the trade of the week the usual listless character. No wheat ships have gone out, but more have come in under charter for future loading. Wheat is unchanged, though options have received a little push at the close, following a weakening just after our last issue went to press. Spot wheat is slow but firmly held. Old milling is scarce, but the demand is not large. Barley desirable for export is steady, but common is rather depressed. New barley is a little soft for grinding, and millers are going slow. Red and black oats are very ill, and whites and grays have not yet come in. Corn is in light stock and unchanged. Beans are stationary, with pinks doing a little. There is no notable change in millstuffs. Hay is not coming in freely, but the market is not active; it is moderately firm for choice wheat and alfalfa, receipts of these being particularly light. Meats are all quiet and unchanged; hogs are holding their advance and no Eastern are arriving, though the Eastern markets are now a little easier. Butter is steady; not so much is arriving and storage has stopped, but the receipts are up with the current demand. Cheese is steady with a fair demand. Eggs are in bad shape; supplies are accumulating and are forced into storage by large receipts of Eastern; there are said to be more eggs in store here now than ever before. Poultry has cleaned up better; large hens and large

chicks are doing best. Potatoes are irregular and have a wide range; reports are of heat injuries to the fields. Onions are steadier with lighter offerings. Large supplies of common fruits are in sight and hard to dispose of, while desirable shipping grades bring fair figures. Cannons are not operating freely in apricots, though prices range from \$10 per ton for poor stuff to \$30 for fancy, with the range for good fruit running from \$20 to \$25 per ton. Dried apricots are in sharp demand, but there is little present interest in other dried fruit. Oranges are slack. Lemons are moving better and limes are firmer. Wool is active for all grades of fine, some lots long neglected now being taken by buyers; coarse wools are still neglected. Small honey buyers are doing something, but the bids of large operators are too low.

We are pleased to call particular attention to the essay by Mr. Luther Burbank of Santa Rosa which appears on another page of this issue. If we are not mistaken Mr. Burbank gives the public fuller entry into his philosophy than he has ever done before. His conception of the nature of the plant and of the relation of the mind of man thereto are stated not only with clearness but with charming literary style. We have had much of the industry of Mr. Burbank, of the breadth of his work and of the patience of his pursuit of his achievements, but if we mistake not we have an intimation such as we have never had before of the richness and keenness of his imagination without which all his other qualities would fail of fruition. Here lies his creative faculty and it is not unlike that which has given the world its great poems and works of art. The world recognizes Mr. Burbank as a great man for what he accomplishes: it is waiting to grant him similar honor for what he thinks and it is very important that such records as we publish this week be multiplied.

Prof. L. H. Bailey of Cornell University, the eminent horticulturist and author, is now well under way with his work on the University of California Summer Session. We gave a full statement of the agricultural and horticultural features of this session some weeks ago, and we are pleased to meet a number of PACIFIC RURAL PRESS readers among those in attendance. The total enrollment of the session is said to be between 700 and 800, and we should judge that not less than a quarter of them are taking either agricultural and horticultural subjects or scientific courses ultimately connected therewith. Prof. Bailey is delighting his audiences with his bright thoughts and his wide knowledge, coupled with a winning way and a cordial frankness. Those who hear him will acquire many points of view new to them, and suggestions of relations of our affairs to the affairs of the outside world which will relieve their provincialism. It was a grand idea to secure Prof. Bailey for his horticultural and nature study lines at our State University, and President Wheeler is entitled to the thanks of the community at large as he certainly has the thanks of those directly participating in this new work of the University.

The most disastrous grain fire in the eastern part of San Joaquin county since 1884 started Friday afternoon, and was not extinguished until near midnight. About 8000 acres were burned over, and the loss will be all of \$50,000. The crops on several large ranches were completely destroyed, and the residence and barns on the Threllfall ranch were destroyed. The farmers first saved their stock and harvesters. A high wind was blowing, and the fire swept the country from Coneta to the Stanislaus river. All of the farmers and their employes for miles turned out and fought the flames to keep them from spreading along the sides of the territory burned over. Most of the grain is insured.

The issue between wire and rope for hay baling continues. We had recently the declaration of the dealers association in favor of wire. Now comes the Stable and Carriage Owners' Association of San Francisco, saying that rope when taken from the bales can be sold for 5 cents per pound as second-hand rope, whereas wire is useless. Rope may be used about the stable for halters and in many ways, whereas wire is apt to get in the feed, as well as to injure the horses' feet. The stablemen are will-

ing to pay from \$1 to \$1.50 per ton more for hay baled with rope than with wire, as hay baled with wire is very much crushed in the middle of the bale and ground to chaff. In the East wire may be used for baling hay, as the hay there is timothy and other similar hay, which requires stronger pressure in baling, as such hay will not press closely together like the sown hay of this State. This State is the only country where sown hay, such as barley and wheat hay, is grown, and this does not require as much pressure as the Eastern hay. Hay baled with rope will feed three more horses to the ton than hay baled with wire, owing to the waste in wire-baled hay. And so it goes: the farmer is likely to lose by the objections of both parties and gain by the advantages of neither.

The proposition upon the basis of which the warfare between the bee keepers and pear growers of Kings county seems to be compromising, is that the two parties shall determine with the microscope whether the nectar or the insects contain the blight germs during the blooming season, and if they do contain these germs the bee keepers shall move the bees away from the orchard region while the bloom is on. Theoretically, this is all right, but we wonder if each party has any apprehension of the difficulty of determining this matter. A bacterium has neither dimensions nor the individuality of a bed-bug, and simply compound microscopic sight will not determine its presence. However, the advantage of this issue will rest with the pear growers. When the bee keepers get their microscopes at work they will see enough to scare them wild and will probably consent to move on the testimony of their own senses.

It is interesting to note that though the fruit crop will on the whole be small, there has been a large movement of early fruit to Eastern markets. One large operator says that California fruit is meeting with a ready demand in the Eastern markets and is bringing excellent prices. This is largely due to the fact that Eastern peaches are extremely late this season, which has created a steady demand for California peaches, and the East will probably take all the fruit shipped from the coast for the next three weeks. After that there will be greater competition. At the present time the shipments of green deciduous fruits from California, up to about the first of July, are only forty carloads behind the record for the same period last year.

Last week at a meeting of the directors of the State Agricultural Society George W. Jackson was elected secretary in place of Peter J. Shields, who was chosen one of the Superior Judges of Sacramento county. Mr. Jackson for a number of years was a telegraph operator in the employ of the Western Union. Later he was superintendent of the Sacramento Gas Company. He is a prominent Elk and is described by his neighbors as one of the most popular men in Sacramento. He had no opposition.

It is a very widely interesting fact Judge Lorigan, sitting in Modesto, has decided the Turlock irrigation district to be legal, and has also held that the bonds are legally issued, and are valid in every respect. The suit was to determine the right of the land owners to restrain the sale of property for assessments levied to pay interest on bonds issued by the district. The Court holds that the land owners are enjoying the benefits of the irrigation system, and that in equity they have no right to object to paying for the water they are enjoying. It is believed that in view of the decision a compromise may be arranged, so that the litigation will end. The works of the district are in excellent condition and the land is proving exceedingly productive under the stimulating power of the water supplied.

It is announced from Washington that Secretary Hitchcock is preparing to organize a forestry bureau in the Interior Department to carry out an extensive system of reforestation, somewhat on the plan successfully pursued in Germany. It was too early to go into the details, he said, but the President and his colleagues were satisfied with the practicability of the scheme and impressed with the results which could be achieved in restoring the rapidly disappearing woodlands of the country.



QUERIES AND REPLIES.

What to Plant.

To THE EDITOR:—Undersigned intends to plant during the coming fall or winter some 200 acres of good level Santa Clara valley land to a crop that will give quick returns. Are sugar beets profitable, or can you suggest something better? Any information that you may give will be greatly appreciated. The question what to plant is of vital importance to hundreds of farmers in this valley, and perhaps for thousands in the State, who are taking up dead and diseased vines (cause unknown or undetermined), and others that are not profitable, and as about nine-tenths of the vineyards of this valley will be uprooted within the next two years, the question "what to plant" should receive wide discussion, for very few will have courage to replant with vines. What is wanted is something that can be counted on to give reasonable returns, even if small, each and every year, so those who wish to replant with vines can do so gradually from the returns from their orchards, or other sources, as their means will permit.—F. SPANGENBERG, Mountain View.

This question is suggested by the serious fatality in the vineyards of Santa Clara valley of which a fuller account is given upon another page of this issue. The question is one of the highest importance and the greatest difficulty. No single crop can be safely prescribed for all the lands on which vines will be lost nor for all the men who will lose them. Some must grow one thing, some another thing, according to the adaptation of their soils and the knowledge, energy and capital which they have. As for sugar beets some find them satisfactory, some do not. Beet growing is no soft snap nor can it be well done from a buggy seat nor a plow seat. The grower has to get down on his marrow bones (and the Californian does not like that), or on some one else's marrow bones, and that does not always pay the man who hires these marrow bones. Then all land which will grow good vines (barring accidents like that our correspondent alludes to), will not grow beets profitably. We cannot tell just what all men or all soils can grow profitably. If we knew that we could soon command capital enough to buy every acre of land in the world and have the human race on our tenant roll. But while it is hopeless to oblige our correspondent with a straightaway prescription we can perhaps perform some service by commending the subject for open discussion of all our available crops in these columns to the end that some new items of information may be brought to light which some may profit by using. To this end our journal was brought into being, and it is proper for all who desire helpful knowledge to appeal to us to start the machinery of a referendum, which we do with pleasure in this particular case.

Powdery Mildew.

To THE EDITOR:—I send some apple leaves infested with something I do not understand. It is mostly on this year's growth. I am situated 25 miles north of Ventura in the mountains, 3400 feet above sea level. If you will kindly tell me what it is and the remedy therefor I will feel ever grateful.—APPLE GROWER, Ventura County.

It is powdery mildew, which we are receiving this year all the way from Oregon to southern California. It largely infests nursery seedlings and the new growth on older trees. The remedy is sulphuring, making the application especially to the infested twigs. Though this disease attacks strongly growing shoots and prevails in moist regions as well as dry, there has appeared during the last few years reason to think that its effects are worse when the tree is short of water. In view of this give the trees some irrigation, if possible, and build up the constitution as well as apply the specific. This is good practice with tree doctors as with other practitioners.

Rye Grass for Hogs.

To THE EDITOR:—We have a great deal of frost up here and I must find something for my hogs that will make a good growth during the winter ready for feed to pasture in May, as the acorns and green grass then give out. I have read in your paper about the perennial rye grass. Would you advise me to plant this during the winter months.—CHAS. KOERNER, Sherwood, Mendocino county.

We have previously commended rye grass chiefly for winter pasturage when alfalfa and other clovers find the temperature too low to grow well. We do not think hogs would do well on the coarse seed stems which would chiefly be in evidence in the early

summer. Rye grass should be fed while it is making fresh growth. We should count it rather poor "dry feed" for any kind of stock. You had better arrange to have some land cultivated to retain moisture and grow summer crops for your hogs, planting them as early as is safe in view of spring frosts. Corn, sorghum, roots, etc., naturally suggest themselves, and beets can be sown quite early, as they will stand some frost. As for sowing rye grass in winter, it depends upon what freezing you get. In our valleys ordinarily it is safe. Where it is very frosty, sowing in the fall as soon as the ground is moist enough will give you a stand which will stand hard freezing.

Harlequin Cabbage Bugs.

To THE EDITOR:—Will you kindly identify the "bugs" sent under separate cover. They have just appeared on the scene, and I judge that by the onslaught they have made on a row of seeding radishes, sucking the life out of the blossom ends and tender shoots, that they may prove very undesirable in a garden patch. Are they "diabroticas" or "harlequins," or either?—L. A. WINCHELL, Toll House.

The insects are harlequin cabbage bugs and they are so rapid in multiplication and so endowed with appetite withal that they work sad havoc with many kinds of garden sass. They will be recognized by old Eastern people as about the size of a beech nut but with rounded corners, black, gaily marked on the back with irregular orange colored spots, and disposed to collect in large numbers on the plants which they infest. As they are suckers they cannot be poisoned with Paris green. A good spraying with kerosene emulsion will avail something but the pests will not stand still to be sprayed. On a small scale they can be trapped by placing cabbage leaves on the ground alongside of the plants to be saved. The bugs will freely take to the cabbage. They also like mustard leaves, if you can find any at this season in condition for them. These trap leaves are to be gathered up, the insects destroyed and more leaves put in place. Much of success in garden work will be found to lie in beginning very early to trap and destroy the bugs, thus cutting off the evil race early in its career.

Phryganidea Californica.

To THE EDITOR:—Does the moth, of which I enclose specimens, do any injury to fruit or vegetation of any kind? Is it a codlin moth, or of that family?—READER, Calistoga.

The moth is Phryganidea Californica, an enemy of the oak trees. It has been very abundant in some parts of the bay regions for several years, and has made the grand old oaks sorry objects by loss of their leaves in midsummer. Fear has been expressed that they might be destroyed; but, as the insect is a native and has worked on the oaks from the beginning, the probability is that they will survive and the moth will sink from its present abundance as its enemies multiply, and it will then be scarce until its cycle of abundance swings around again. The moth is very different from the codlin moth. It is considerably larger, very different in its color and in its habit, for it carries its wings in fan-shape when at rest, while the codlin moth folds them closely. It is a very showy moth, as compared with the codlin, and it is a day-flier, while the codlin is in concealment during daylight. These are obvious differences; entomologically there are even greater differences.

Cottony Cushion Scale.

To THE EDITOR:—I send by Wells, Fargo & Co. a box with an orange branch badly affected by what? What is the remedy?—READER, Redwood City.

It is the old cottony cushion scale which threatened to destroy our citrus interests until its increase was speedily checked by the introduction of the first "Australian ladybug" (Vedalia cardinalis). Not only was its increase checked, but it has been almost exterminated, so that Alexander Craw finds it difficult to secure enough to keep his vedalias in good breeding condition. Apply to Mr. Craw, at Clay Street Dock, San Francisco, for a colony of vedalias and send him a box of infested branches to supply his vedalia boarding house.

Woolly Aphis Galls--Santa Rosa Walnut.

To THE EDITOR:—I planted an apple orchard a year ago this spring, and find quite a number of the trees have the root knot. Would it be safe to replant

with walnut trees? Also, will you please state where I can obtain the Santa Rosa soft-shell walnut and whether it is adapted to the coast climate?—J. C. STEELE JR., Pescadero.

The specimens you send do not show what is commonly called root knot. This trouble is, according to our observation, rarer on apples than on other trees. Your knots are the swellings produced by woolly aphis. This insect does not affect the walnut, consequently you need not apprehend trouble from it in your proposed planting. The Santa Rosa soft-shell walnut has not, so far as we have noticed, been propagated away from its native region, but its record there, according to Mr. Burbank's testimony, commends it for the central coast region, at least. We presume you can get it from W. H. Schieffer & Co., of Santa Rosa.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending July 1, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Clear, pleasant weather prevailed during the first of the week, and was followed by remarkably high temperatures for June. With the exception of northerly winds in some localities, which caused but little damage, conditions have been favorable for all crops. Harvesting is progressing rapidly. The yield of wheat is fully as good as expected, and the quality excellent. Hay is abundant and of good quality. Hops are said to be earlier than usual and looking well. The hot weather toward the close of the week has caused fruit to ripen rapidly, and orchardists are endeavoring to handle the crop expeditiously. The olive crop will be large. Citrus fruits and grapes continue in good condition.

COAST AND BAY SECTIONS.

High temperatures have prevailed most of the week except on the northern coast, and grain and fruit have matured rapidly. Harvesting is progressing in all sections, and wheat and barley are yielding large crops, excellent in quality. A heavy crop of good hay is being baled. Fruit picking, drying and canning are in progress. Reports from the Santa Clara valley indicate that prunes, peaches and apricots will yield very light crops. In the vicinity of Niles the apricot crop is very heavy, and there will be a fair crop of peaches. The cherry crop in Alameda county is very light. Small fruits in Humboldt county will be light and of poor quality. Sugar beets are in good condition.

SAN JOAQUIN VALLEY.

The weather was clear and cool during the first part of the week and very warm during the latter. The warm weather ripened both grain and fruit very rapidly. The grain harvest is general, and rapid progress is being made. The yield and quality are fully up to expectations. The grain is mostly being stored in the warehouses, very little being shipped to market. Large fires occurred in several portions of the valley during the latter part of the week, destroying many large fields of grain and much pasturage. The second crop of alfalfa is being cut in some places, and both the yield and quality are good. Considerable hay is being shipped. Fruit is ripening fast, and a large crop of good quality will be harvested. The canneries and driers are in full operation, and large quantities of apricots and peaches are being shipped. Grapes are doing nicely, and the outlook is for a large raisin crop. Stock are in good condition. Water for irrigation is plentiful.

SOUTHERN CALIFORNIA.

The warm weather has been beneficial to citrus fruits, berries and some varieties of deciduous fruits, but has caused slight injury to apricots and walnuts in some sections. Orange groves are being liberally irrigated, and the trees are in excellent condition, with indications of a heavy yield. Deciduous fruits will yield light crops in nearly all sections. Beans are in good condition, but were slightly damaged by extreme heat in portions of Ventura county. Sugar beets continue thrifty, and a heavy crop is predicted. Grain harvest and hay baling are in progress.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Tuesday, July 2, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week.....	Minimum Temperature for the Week.....
Eureka.....	.00	.00	T	.01	108	56
Red Bluff.....	.00	.00	T	T	104	50
Sacramento.....	.00	.00	.00	T	82	48
San Francisco.....	.00	.00	.00	T	110	54
Fresno.....	.00	.00	.00	T	100	52
Independence.....	.00	.00	.00	T	104	50
San Luis Obispo.....	.00	.00	T	T	86	58
Los Angeles.....	.00	.00	.00	T	86	60
San Diego.....	.00	.00	.00	.04	112	72
Yuma.....	.00	.00	.00	.04	112	72



Number of Foot.	CHARACTER OF SOIL.	Weight per Cubic Foot.....	Maximum Water Capacity.....		April, 1899.		June, 1899.		Sept., 1899.		Dec., 1899.		March, 1900.		Oct., 1900.	
			Water Content.....	Degree of Saturation.	Water Content.....	Degree of Saturation.	Water Content.....	Degree of Saturation.	Water Content.....	Degree of Saturation.	Water Content.....	Degree of Saturation.	Water Content.....	Degree of Saturation.		
		Lbs.	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1	Clayey loam.....	76.4	37.8	15.1	40.0	4.2	11.1	3.2	8.4	3.2	8.4	15.0	40.0	4.0	10.5	
2	".....	78.2	37.6	17.6	46.7	6.3	16.7	4.0	11.0	4.0	11.0	17.0	45.2	5.0	13.2	
3	".....	77.5	37.5	17.4	46.4	8.4	22.4	5.6	14.8	4.5	12.0	16.5	43.8	7.3	14.4	
4	".....	73.3	36.5	20.1	55.0	10.0	27.4	7.4	20.3	7.0	19.1	20.0	54.8	7.4	20.2	
5	".....	75.5	38.0	20.0	52.6	11.0	28.9	8.2	21.5	7.5	19.7	20.0	52.6	6.8	17.8	
6	Loam and gravel.....	83.0	18.9	9.7	48.7	6.2	31.1	5.0	25.0	2.4	12.0	10.0	50.0	2.8	14.0	
7	Coarse gravel....	111.0	12.5	6.3	50.4	1.6	12.8	1.5	12.0	1.5	12.0	6.4	51.2	2.0	16.0	
8	Gravel.....	96.5	18.9	8.4	44.4	3.0	15.8	2.6	13.6	2.5	13.1	8.5	44.7	2.8	14.7	
9	".....	96.0	20.0	7.4	37.0	3.4	17.0	3.2	16.0	2.8	14.0	7.3	36.5	3.6	18.0	
10	".....	97.0	16.6	4.5	27.1	3.4	20.4	3.3	20.0	2.2	13.2	5.0	30.7	2.9	17.8	
11	".....	96.8	17.2	6.8	39.4	3.4	19.9	3.2	18.6	3.0	17.4	7.0	40.7	3.6	20.9	
12	".....	98.0	21.2	4.7	21.1	3.0	14.1	3.0	14.1	2.8	13.2	5.0	23.6	3.0	13.9	
13	".....	102.4	22.6	4.7	21.0	2.7	11.9	2.6	11.5	2.8	12.5	5.0	22.1	3.0	13.2	
14	Clay and gravel....	87.4	30.0	17.3	57.6	16.0	53.3	15.0	50.0	14.0	46.6	17.6	58.6	15.0	50.0	
15	Gravel.....	97.3	24.5	8.6	35.1	5.1	20.8	4.2	17.1	3.1	12.6	6.6	35.1	3.0	13.2	
16	Gravel and clay....	80.8	42.1	30.1	71.4	22.2	52.7	20.0	47.5	20.0	47.5	30.0	73.6	20.8	49.5	
17	Clay.....	74.0	60.8	36.8	60.5	30.1	49.5	27.5	45.4	27.9	46.1	57.0	60.8	29.2	48.1	
18	".....	73.3	54.5	30.4	55.7	23.3	42.7	23.0	42.1	25.0	45.8	31.2	52.7	26.1	48.0	
19	".....	77.0	48.4	26.8	55.7	22.0	45.4	21.1	41.6	21.8	45.2	21.2	52.2	22.7	47.0	
20	".....	74.5	52.2	25.5	46.9	21.7	41.5	21.0	40.2	21.8	41.7	24.6	47.1	24.2	46.5	
21	".....	76.0	50.0	19.3	38.6	18.9	37.8	20.0	40.0	20.6	41.2	23.3	46.6	22.0	44.0	
22	".....	76.5	49.6	17.6	35.5	19.4	37.0	20.0	40.3	20.4	41.1	21.8	43.9	21.6	43.5	
23	".....	75.8	51.1	17.3	33.6	20.3	36.0	21.0	40.0	20.9	41.0	22.1	43.2	21.6	42.2	
24	".....	78.0	45.1	14.4	31.9	15.5	34.3	17.5	38.8	17.5	38.6	19.5	43.2	19.0	42.2	
25	".....	78.4	41.1	11.3	27.5	12.3	29.9	13.8	33.6	12.8	31.1	17.5	42.6	17.1	41.8	
26	".....	76.0	45.1	15.6	34.5	13.8	30.5	14.5	32.1	14.6	32.4	19.1	42.3	18.7	41.5	
27	".....	75.2	47.0	19.0	40.4	16.8	35.7	16.9	35.9	17.0	36.1	19.1	40.6	19.6	41.4	
28	".....	75.0	44.6	22.1	49.5	16.8	37.6	20.0	42.5	20.0	44.8	22.4	50.3	22.0	49.3	
29	".....	73.2	45.0	23.4	52.0	19.7	43.7	21.0	46.6	21.0	46.6	24.0	53.3	23.8	52.9	
30	".....	75.8	45.4	25.2	55.5	22.3	49.1	22.5	49.5	22.1	48.9	24.6	54.2	24.1	53.0	
31	".....	74.0	45.2	26.2	57.9	25.1	55.5	25.1	55.2	25.0	55.3	25.2	55.7	25.0	55.3	
32	Clay and gravel....	81.5	37.0	24.3	55.6	23.5	63.5	23.3	63.0	22.3	62.7	23.4	63.2	23.0	62.9	
33	".....	79.0	41.1	30.6	74.4	28.5	69.3	28.4	69.1	28.0	68.1	28.4	69.8	28.0	68.1	
34	".....	80.0	40.0	35.2	88.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	



during the summer of 1899 the stratum below the twenty-fifth foot lost considerable moisture, notwithstanding the fact that the 5-foot stratum above gained moisture during the same period. This was evidently due to the lowering of the level of the ground water, as the water in all of the wells of the region fell during this season. The comparatively light rainfall both in the valleys and in the mountains during the preceding one and one-half years was undoubtedly the cause of this fall in the level of the ground water. On account of the coarse gravel encountered in the thirty-fourth foot, it was impracticable to bore to ground-water after June, 1899. If this could have been done, it would probably have been ascertained that at the same distance from the water level the conditions would have been practically the same at the end of the season as at the beginning, the water of the stratum above having simply settled and adjusted itself to the changing position of the ground-water. During the winter of 1899-1900 the lower 8 feet gained a little in moisture as the water level raised slightly, and lost a little again during the succeeding summer, as the water level fell. Thus it seems that the upper stratum to a depth of about 25 feet was influenced by above-ground operations and conditions, while the soil below was influenced only or principally by the changes in the ground-water level. Investigations after the heavier precipitation of the past winter will throw additional light on this subject.

**GAIN IN WATER DURING WINTER 1899-1900.**—During the winter of 1899-1900 each 25-foot column gained 125 pounds, or an equivalent of 2 feet of water. The gain being greater than the loss during the preceding summer, the soil at the end of the irrigating season, March 12, was moister than at the same time the previous spring. This gain is 1 foot less than the depth given previously as to the amount applied. This does not mean that a foot of the water applied was lost by evaporation and percolation during the winter, for it is to be remembered that it was ascertained during the winter of 1899 that the growth of rootlets begins early in February. The production of these rootlets, the rise of sap in the tree, the swelling of the flower and leaf buds, and the putting forth of bloom and early leaves (as had some of these trees when the samples were taken), all mean the withdrawal of water from the soil.

**LOSS OF WATER DURING SUMMER OF 1900.**—It will be observed that the total loss of moisture between March 9 and October 8 was a little greater than that given for the previous summer. This was undoubtedly due to the fact that the samples were taken earlier in the growing season than they were the previous spring. Experiments were planned and inaugurated during the spring of 1900 to ascertain how much of the total loss of moisture would be due to withdrawal by the trees, and how much would escape directly from the soil. But it developed that the methods pursued were not adequate. As has been stated, one space between four trees was covered with an airtight sheet of metal bordered with 4-inch strips that were sunk into the soil. The purpose of this was to prevent the escape of moisture directly from the soil in that section. It happened, also, that a few of the trees near the center of the orchard had died when young, leaving a vacant space for the center of which it was thought no moisture would be withdrawn by the trees.

When the samples were taken from the covered area October 9 it proved, as has been stated previously, that the surrounding trees had put out additional rootlets and caused all the soil, with the exception of a few surface inches, to be as dry as that of the adjacent uncovered area. While the soil samples from the vacant space showed the presence of considerably more moisture than in the part occupied by the trees, a little reflection resulted in the conclusion that no definite calculations could be based on the results, as it was not known during what part of the summer any particular portion of the losses occurred in either section. It seemed evident that the comparative losses should have been determined, from week to week, since moisture that trees (had they been present) might have withdrawn from the upper 5 or 6 feet early in the season would be lost from the vacant area, by capillary action and evaporation, during a later part of the summer. Samples should have been taken also from the covered area at least once a month, in order to determine the comparative changes that were occurring. It is hoped that experiments now under way in this orchard will bring results that will throw some light at least upon this problem as to how much water orchard trees use under the conditions existing in the vicinity of Phoenix.

**MOISTURE CONTENT CHANGES OF 1899 COMPARED WITH THOSE OF 1900.**—By reference to table, it will be seen that each foot of the 25-foot column lost moisture during the summer of 1900, instead of the stratum between the 20th and the 26th foot, gaining, as was the case the previous year. The decrease in moisture content was quite regular from the 16th to the 26th foot. This difference between what occurred during the summer of 1899 and what occurred during the summer of 1900 was undoubtedly due to the fact that the comparatively dry stratum encountered between the 20th and 26th foot, April, 1899, had become about as moist as it could remain. In other

words, this stratum was, at the beginning of the summer of 1900, so moist that it could retain no additional water permanently. Its degree of saturation was about the same as that of the surface stratum of loam. If any water escaped the roots of the 16th, 17th, 18th and 19th feet (where the soil was so moist at the beginning of the season) and percolated downwards, it had evidently passed through this formerly dry stratum into the soil below. Continued heavy irrigation of this orchard during the winter may finally so fill all the soil with moisture from the 15th foot to ground water that at the end of succeeding summers the increase in the degree of saturation will be regular from the 15th foot downward.

**AMOUNT OF WATER NEEDED BY AN ORCHARD.**—The set of samples taken April 12, 1901, showed that the gain during the past winter was just about the same as the loss during the previous summer—between 108 and 109 pounds per 25-foot column, or an equivalent of, approximately, 21 inches of water over the orchard. This evidently indicates about how much water should be left deposited, henceforth, at the end of each winter, in this underground bank, that the individuals depending upon the deposit for a living may not suffer during the summer.

The difference between the amount applied during the winter (48 inches) and the gain in soil moisture (21 inches) represents the evaporation from the soil, the amount used and exhaled by the trees, and the amount used and exhaled by the clover grown in the orchard for a green-manuring crop. The latter, judging by the amounts needed to grow similar crops during the winter, probably withdrew from the soil fully 20 inches of water. The amount lost by evaporation from the soil surface was probably slight, as the soil was covered with the growth of clover most of the period.

The above amount (4 feet) probably represents quite accurately the amount that need be applied to deciduous orchards in the warm valleys of southern Arizona to grow a heavy green-manuring crop, and at the same time store enough water in the soil to carry the orchard through the hottest and driest summers. Judging by observations, and by consultation with orchardists, this amount is frequently applied during the summer to maintain the orchard alone, with no better results than were secured last summer by winter irrigation alone.

## HORTICULTURE.

### How to Produce New Flowers and Fruits.

By LUTHER BURBANK of Santa Rosa at the recent Floral Congress in San Francisco.

Who does not love flowers? For whom will not flowers make more sunshine? Flowers from the hands of a loved one, what sweeter, sunnier gift can be thought of? Flowers speak to us of poetry, music, life and love.

Flowers always make people better, happier and more hopeful, they are sunshine, food and medicine to the soul and can never be taken in overdoses.

In this paper I shall try not to burden you with any dry, scientific facts, and if any of them should appear you may rest assured that it is because in the words of Mark Twain, "They simply stew out of me unconsciously." I wish to tell you simply just how to proceed in the production of new types of flowers and the improvement of the older and well-known ones.

**THE PLASTICITY OF PLANT FORMS.**—The chief work of the botanists of yesterday was the study and classification of dried, shriveled plant mummies whose souls had fled, rather than the living plastic forms. They thought their classified species were more fixed and unchangeable than anything in heaven or earth that we can now imagine.

We have learned that they are as plastic in our hands as clay in the hands of the potter or color on the artist's canvas, and can readily be molded into more beautiful forms and colors than any painter or sculptor can ever hope to bring forth. There is not one weed or flower, wild or domesticated, which will not sooner or later respond liberally to good cultivation and persistent selection. The changes which can be wrought with the most plastic forms are simply marvelous, and only those who have seen this regeneration transpiring before their very eyes can ever be fully convinced.

**REQUIREMENTS OF PLANT IMPROVEMENT.**—It takes time, skill and patience, of course; what valuable work is accomplished otherwise? These profound changes in plants go on quietly as do all the great, beneficent upbuilding forces of nature. No powder is burned, no big guns brought forth, no martial music is heard, for they are destroyers not producers. The beneficent forces of nature are, like truth itself, quiet but persistent and all powerful.

What occupation can be more delightful than adopting the most promising individual from among a race of vile, neglected orphan weeds with settled hoodlum tendencies, down-trodden and despised by all, and gradually lifting it by breeding and education to a higher sphere. To see it gradually change its sprawling habits, its coarse, ill-smelling foliage,

its insignificant blossoms of dull color to an upright plant with handsome, glossy, fragrant leaves, blossoms of every hue and with fragrance as pure and lasting as could be desired. In the more profound study of the life and habits of plants, both domesticated and wild, we are surprised to see how much they are like children: study their wants, help them to what they need, be endlessly patient, be honest with them, carefully correcting each fault as it appears, and in due time they will reward you bountifully for every care and attention and make your heart glad in observing the results of your work. Weeds are weeds because they are jostled, crowded, cropped and trampled upon, scorched by fierce heat, starved or perhaps suffering with cold, wet feet, tormented by insect pests or lack of nourishing food and sunshine. Most of them have opportunity for blossoming out in luxurious beauty and abundance. A few are so fixed in their habits that it is better to select an individual for adoption and improvement from a race which is more pliable, this stability of character cannot often be known except by careful trial, therefore members from several races at the same time may be selected with advantage; the most pliable and easily educated ones will soon make the fact manifest by showing a tendency to "break" or vary slightly or perhaps profoundly from the wild state. Any variation should be at once seized upon and numerous seedlings raised from this individual. In the next generation one or several, even more marked variations will be almost certain to appear, for when a plant once wakes up to the new influences brought to bear upon it the road is opened for endless improvement in all directions, and the operator finds himself with a wealth of new forms which is almost as discouraging to select from as in the first place it was to induce the plant to vary in the least, and now comes the point where the skill of the operator is put to the severest test.

**THE IMPORTANCE OF SELECTION.**—When a wild plant has been induced to change its old habits, fixed by ages of uniform environment, it needs some one with a steady hand at the helm to guide its bark into a new and more prosperous port and into a condition of refinement and beauty sufficient to adorn any occasion. Besides a selection another important factor in the production of new flowers is in the amalgamation of the best qualities of two or more species or varieties by crossing, but crossing quite as often produces plants with all the faults of both parents as all their virtues, its chief value is in breaking up the fixed character of any type, then by careful selection of the best through several generations more advancements may often be made in a few years than could be made in a century if the fixed type had not been broken up by the crossing of types or species; but crossing is of little use unless followed by very careful selections of the best, and not only the best, but a certain type of the best should be kept in view and all plants which do not closely follow the chosen type should be weeded out as soon as their vagrant character appears, thus in annuals fixed types may be produced, but in perennials when a splendid type appears it can generally be multiplied to any extent by budding, grafting or from cuttings, thus avoiding the care and time required in making this character permanent as with annuals.

**AN ILLUSTRATION.**—We say to our own Miss Golden Cup or Miss Eschscholtzia, as the bon ton call her, "This beautiful dress of bright golden hue which you have always worn on all occasions is very becoming to you, and exceedingly appropriate to this land of perpetual sunshine, but, Miss Queen Golden Cup, if you will sometimes adorn yourself with a dress of white, pale cream, pink or crimson we could love you still better than we do." Now, Miss Eschscholtzia, though having her family tastes and characteristics very thoroughly fixed, still belongs to the great Papaver race, which has often shown itself willing to adapt itself to the discipline of new conditions, even at first distasteful in the extreme.

So, after taking Miss Golden Cup into our gardens and constantly making these suggestions to her, she hesitatingly consents to don a dress a shade lighter in color, and then lighter still, until now we have her not only in dresses of gold, but in deepest orange, light and dark shades of cream, purest showy white, or all these combined, and by constant selection and various educational influences in this line she will adorn herself in a dress of almost any color which may be desirable and at the same time seems to take the greatest pleasure in improving herself in every grace of form and feature.

**ANOTHER ILLUSTRATION.**—We often suddenly meet Mr. Cactus or Mr. Thistle, and sometimes almost lose our temper on account of their irascible tendencies and punctilious reception, but after regaining our composure we say: "Mr. Thornicuss! Ah, pardon me, Mr. Thistle, we can never enjoy your company while you wear all those tacks, pins and needles. You would look much better if you would drop those ugly thorns. They cost you too much to produce and stick all over yourself, peaked end out, and no doubt they make you almost as unhappy as they do your neighbors. At heart you are a splendid fellow. All the slugs, bugs, birds and animals like you; you are good enough to eat."

"Yes, I know you are obliged to wear those pins, tacks, needles, fish hooks and things all over your



clothes from head to foot, just because you have such a good, tender, juicy heart, which all the two, four and six-footed marauders like." Now, if we invite Mr. Thistle into our gardens and patiently and earnestly teach and thoroughly convince him that all the marauding animals shall be kept out, it will not be very long before some member of his tribe will see fit to partially discard some of those exasperating pins and needles and put on a more civilized suit of clothes, and by further careful selections from this one varying individual others are produced which are absolutely spineless, to remain so as long as the marauding animals do not disturb them, often becoming useful members of our parks and gardens. It is great effort on the part of the plant to produce all these spines, and when this effort is made unnecessary the plant will at once become more docile and pliable, and can be easily led into almost any useful occupation in which plants are employed.

Roses, blackberries, raspberries and gooseberries can also be made as perfectly thornless as strawberries or apples are by the same education and individual selection. At present, however, the authors of new fruits and flowers are fully employed in improving the size, abundance and perfection of form, color and fragrance in flowers and the abundance and lusciousness of fruits, otherwise the thorns would have been eliminated long ago.

**MENDING NATURE.**—Everything which we now have in fruits, flowers, vegetables or grains has been brought to its present state of perfection by the same education and selection, which is only a turning of the forces of nature into new channels for the welfare of mankind. By the patient application of these educative influences the wheat, corn, rice and other plants which were once wild grasses have been induced to produce enormous quantities of nutritious eggs, which, when divested of their unnutritious shells or coverings, furnish food for all the earth. Our fruits and flowers have all traveled the same road, ever onward and upward, under the tender care of the horticultural missionaries of the past— forerunners of civilization—who really knew but very little of the possibilities of plant life or the transcendent forces which nature has placed in the keeping of plants for the growth and uplifting of humanity. Plant life is so common all about us that we seldom stop to think that almost every good we have on earth is produced by their silent but all-powerful forces. Only lately have we learned how readily we can train, combine and guide these forces into endless useful and beautiful forms, which even the imagination cannot conceive. The careful investigator along these lines is often amazed at the wealth of new forms, new qualities, and new colors of fruits and flowers which nature lavishly showers upon him, seemingly almost by the asking, when once we know the way and apply ourselves to it. It takes, however, an intimate knowledge of the affinities of plants, a keen perception of the useful forms when produced, a sweet and abiding patience which knows no end, and to carry on extensively the purse of a multimillionaire; but any one can take in hand any one plant and in a few years produce wonders in variation and improvement, and at the same time be gaining patience, knowledge, health, happiness and personal discipline, all of which are far above price, and if a new and beautiful flower or fruit is produced which all the world wants, what a happiness has been secured, not only for the author but an added legacy of sunshine and health for all the world for all time to come. Are not these inducements enough to make one wish to help on this great work of world-wide import, impelling upward not only the destinies of tribes and nations, but the broader destinies of all mankind?

## THE FIELD.

### Truck Farming in Alameda County.

In Alameda county, says the Oakland Enquirer, the area devoted to vegetables has been increasing lately at a rapid rate, since the profit which is found in peas, potatoes, tomatoes, rhubarb, asparagus and several other vegetables is large enough to tempt the owners of the best soil to go into the business. Twelve or fifteen years ago the production of early vegetables for the San Francisco market was the most important part of the industry, and this was conducted largely by the Portuguese, who secured locations on the hillsides from Warm Springs around to Haywards and San Leandro.

**HILLSIDE FARMS.**—This hillside region produces the earliest vegetables in the State, or as early as any, and the potatoes and peas grown here commence coming into market even before spring has arrived, for the winter rains are all that are needed to bring forward the crop in this belt, which is practically frostless. But, while years ago this early vegetable growing represented the predominant industry, and while it is still a rather important one, it probably does not pay so well as it did formerly, since now early vegetables are brought from Arizona and other southern regions. There are also hints that the pro-

ductivity of these hillside lands is diminishing, and that the growers obtain smaller profits.

**THE RICH VALLEY LANDS.**—The center of the vegetable industry now lies elsewhere. It is found very profitable to grow certain vegetables on the deep rich valley lands, which although they do not produce so early bear much larger crops. No very accurate figures on the acreage devoted to vegetables in this county can be obtained, but fairly trustworthy estimates have been made by many persons who have opportunities to know. One of these estimates is that there are 8000 acres devoted to vegetables in Alameda county, not including sugar beets, which would add 4000 or 5000 acres more. The most important crops are peas, potatoes, tomatoes, cucumbers and summer squash, in addition to rhubarb. A large part of the business is done between Haywards and Elmhurst, although a great many tomatoes are grown in other parts of the county, including the Livermore valley. In former times the vegetable business was largely in the hands of the Portuguese and Italians, who conducted it in a small way on account of lack of capital, but the wealthier American farmers have now taken it up in a wholesale fashion, since they find that it pays better even than fruit. A crop can be obtained the first year after planting, while it takes five years to secure a producing orchard. A great many vegetables are also grown between the rows of trees.

**TOMATOES.**—The tomato region of Alameda county extends along the bay shore from Mt. Eden to Elmhurst, and the tomatoes produced in this region are preferred by the canners to the Sacramento river article, because they contain more substance and not so much waste; but tomatoes are also grown in other parts of the county. Some of the tomato fields of Alameda county are very large, tracts of 100 acres not being uncommon. The time of the tomato harvest is between the 10th of August and the end of October, although frequently the crop is practically all in before the 1st of October. To secure the best land, if he is farming on rented land, the tomato grower must pay from \$16 to \$20 an acre, while a fair price for the product is \$7.50 per ton, and the yield is about twelve tons to the acre. A large grower will ship three carloads, twenty tons to a car, each night. Frequently seventy or eighty pickers will be employed on a single ranch.

**POTATOES.**—The potato crop is one of increasing importance, since it has been found that there is good money in producing the big Burbank potatoes and other commercial varieties. The best soil will produce from seventy-five to eighty sacks to the acre, although in former times record yields of 150 sacks to the acre were produced.

**PEAS.**—The growing of peas for canning purposes has assumed importance within a comparatively recent period, which is due to the circumstance that the canning syndicate, which operates on the plan of specialties, putting up in each of its canneries the products which are grown best in that particular locality, has made this the pea-canning center. As giving an idea of the importance it has assumed it may be mentioned that when an Enquirer representative visited the San Leandro factory the other day it was canning peas at the rate of 1200 cases per day. Each case contains twenty-four cans, and this makes a daily pack of 28,800 cans; as the season lasts about thirty days many hundred thousand cans are put up before operations are stopped.

Recently a new idea in the growing of peas has been introduced—that is, sowing them broadcast, as wheat and barley are sown. An Enquirer representative saw a field of 140 acres which was one solid block of peas. Of course peas sown in this way are not picked by hand, but are mowed and taken to the factory, vines and all. Then they are run through a machine called a viner, after which the pods are put into another machine. In this machine, which is not unlike a threshing machine, they go through two processes; the first breaks the pods, and the second, which consists in shaking the pods and peas in a sieve, separates the two and allows the peas to drop through into receptacles provided for the purpose. If this method of pea production proves to be a success—for as yet it is in only the experimental stage—it will greatly reduce the labor cost, which is now very high, and will tend to make canned peas cheaper than at the present time. One difficulty in the way has been to secure peas that will all ripen at the same time, for where the crop is handled by machinery a large loss would be incurred if only about half of the peas were sufficiently developed to be saved.

**CUCUMBERS AND ASPARAGUS.**—The cucumber is another vegetable which flourishes in the vicinity of Elmhurst, where most of them are grown to supply the San Francisco pickle factories. Cucumbers are grown by contract and five or six farmers have had a sort of monopoly of the business, out of which in the last dozen years they have made fortunes. The growers aim to produce a cucumber which will not be too large to make an acceptable pickle. The smaller sizes are most in demand, but the contracts call for sorting into three grades, according to size.

The asparagus business of Alameda county also has its center, and this is on the Bay Farm island, adjoining Alameda. On this piece of fertile land a

variety of vegetable crops were grown in former times, but the soil has been found so well adapted to asparagus that the whole island is likely to become one big asparagus bed. The vegetable is also produced in a smaller way in other parts of the county, there being about 250 acres devoted to it in the vicinity of San Leandro and some in the Warm Springs section.

### The Celery Industry of Orange County.

The Santa Ana Blade of last week says the rush is now on to get the land ready for celery planting, and the plows are going in all directions, turning over the rich soil for the last time before the celery plants are set out. Some planting has already been done by those who have in view the needs of the local market, but planting generally will not begin for three weeks yet. The acreage intended for celery will not be so large this season as last, if figures gleaned from individual growers are to be relied upon, but more good celery will probably be raised to the acre, because of the greater care taken this year to sow nothing but seed true to name.

It must not be inferred from this that less damp land will be cultivated this season than last, for, in fact, there will be considerable under crop, but some who, from a combination of circumstances, were unsuccessful in celery growing last year have concluded to leave that branch of agriculture to their more fortunate neighbors, and try something requiring less skill and patience and depending for its success also less upon the element of chance. To this end a new departure has been made, and several hundred acres of celery land this season is planted to beans and beets, about 200 acres of the former and 150 of the latter being already planted and looking finely. Beets and beans are purely in the nature of an experiment in this locality, and wisecracks in the past have unhesitatingly given it as their opinion that neither would do well on that particular soil, but at the present stage of the game it looks as though there had been some mighty poor guesswork done, for the crop is most promising, and experienced beet and bean growers who have visited the locality are favorably impressed with existing conditions and predict satisfactory results from the new venture.

Besides the damp land thus taken up with beans and beets, a considerable area last year in celery is this season in corn and alfalfa, and these crops, too, look well, although warmer weather is needed to make a sure corn crop.

Not nearly so many potatoes will be grown this season as last in the damp lands, for the supply last year glutted the market and much loss resulted in consequence.

This year a bug has caused lots of damage, for its voracious appetite has required many dollars' worth of beans, beets and celery plants to satisfy it, and at one time it looked as though the plague would almost completely destroy all the celery plants in sight.

But the bug has taken its departure and the celery farmer feels easier again, since it is now assured that there are still celery plants enough to fill all the requirements, and until the next thing happens to fill him with alarm his prospects are everything to be desired. The establishment of a tile factory in the neighborhood is welcomed with satisfaction by the damp land farmers, and arrangements are being made to use a large quantity of the factory's product in the immediate future.

### Pacific Coast Jersey Cattle Club.

An article recently appeared in a California paper concerning the Pacific Coast Jersey Cattle Club which is somewhat misleading, and as this article has been copied by some of the county papers it seems advisable to correct a few of the erroneous statements. The first three paragraphs of the article are correct, with the exception of the opening phrase, which states that "Jersey enthusiasts are striving to revive the lumbering organization of breeders known as the Pacific Coast Jersey Cattle Club." The fact of the matter is that the officers of the club hold office until their successors have been chosen, and the recent meeting was held for the purpose of filling some vacancies occasioned by death or removal from this coast, in order to maintain the organization, and not for the purpose of reorganization as stated in the paper referred to. The article also implies that practically no registration has been going on for years, whereas the reverse is the truth, as the secretary has recorded animals continuously, and in considerable numbers when one takes into consideration the apathy that existed for some years in regard to thoroughbred stock. The article further states that "the present movement seems to be for the purpose of correcting lost records, etc." What "correcting lost records" refers to I am at a loss to understand, as any record that is lost is certainly of no use to the club or to anybody at all, and being lost cannot be corrected. I trust that you will deem it worth while to mention this matter in your columns.

JOSEPH MAILLARD, Secretary.

San Geronimo.



## Agricultural Review.

### ALAMEDA.

**BUYING APRICOT PITS.**—Niles Herald, June 28: Edward A. Ellsworth has secured a contract with the Royal Packing & Drying Company of San Francisco to dry all their Alameda county purchase of apricot pits. This will include those from the Emeryville, Hunt's Oakland and San Leandro canneries. The pits will be cracked and the kernels dried and sacked for shipment at his drier. Mr. Ellsworth started his drier to work this morning with fifty hands. He will dry between 300 and 400 tons of Sacramento valley apricots before the home ones are ready to begin upon. The first carload arrived yesterday.

### BUTTE.

**PROFIT IN PICKLED OLIVES.**—Oroville Register, June 27: Louis Glass of San Francisco is such a firm believer in the future of olives in this section that he has purchased the pickling plant, lot and building used by Rohb & Co. last year in Palermo. He has made arrangements with Wm. H. Cox to take charge of the same and to pickle a large quantity of olives this fall. Mr. Cox put up a large quantity last year and found a ready sale for them. Two barrels of his olives were sold at 80 cents a gallon and were repacked and sold at \$2 a gallon. Mr. Glass will have sixty or seventy tons of olives cured when the pickling season comes on.

### COLUSA.

**Colusa Sun:** Grain is being delivered at the Colusa warehouse at the rate of 500 bags daily. This is the largest daily average ever delivered at above warehouse.

**NARROW ESCAPE FROM AN ANGRY COW.**—Colusa Sun: Ed E. White was hooked by a cow recently and severely injured. He was milking and, the flies being very bad, he caught hold of the cow's balter to tie her to the fence. In her efforts to get away his arm became caught in the balter and she partly threw him from his feet; she made another lunge, and this time her horn struck Mr. White in the right side, cutting a horrible gash. The horn cut into the body nearly four inches, but, fortunately, ranged around the ribs and did not enter the cavity. The doctor says Mr. White had a very narrow escape, but he thinks no had results will follow.

### LAKE.

**FINE MOHAIR.**—Ukiah Dispatch-Democrat: Pablo Ogden of Upper Lake, one of the directors of the American Angora Goat Breeders' Association and the inspector for California, has received the highest price for his mohair for the last four years of any man in the world. He has a letter from the Massachusetts Mohair Plush Co. which gives him the credit of raising the best mohair in the country. Mr. Ogden graded his mohair in three lots, the highest grade bringing 45 cents per pound and the average 34 cents per pound. When it is taken into consideration that mohair is selling this year for 10 to 12 cents per pound less than usual, the quality of Ogden's mohair speaks for itself.

### MERCED.

**THE GRAIN OUTLOOK.**—Merced Sun, June 28: Harvesting is well under way at present and grain is being hauled to almost every warehouse in the county. The quantity of grain sold thus far has been light, almost wholly barley, and the price has been generally low. There is a fair demand for brewing barley, considerable of which exists throughout Merced county. The quality of barley is far above that of the average year. Some wheat has been harvested and the quality is excellent, the kernels being remarkably well filled. Apparently there will be no more foul stuff than usual and there is scarcely any evidence of smut.

**GRAIN FIRES.**—A Los Banos dispatch of June 26th tells of a disastrous fire in that quarter, and that 1500 acres of grain, the property of Z. G. Jamieson, were destroyed, in addition to a large area of feed. The family of the late John Copeland, near Merced, lost 750 acres of grain on Monday by fire. Forty acres of grain of an adjoining tract were burned, and hundreds of acres of pasture. The Copeland grain was insured for six sacks to the acre. It would perhaps have yielded ten sacks.

### MODESTO.

**GRAIN BURNED.**—Modesto Herald, June 27: A fire originating from sparks from a locomotive caused loss to farmers in the Westley quarter Friday afternoon, about 250 acres of heavy summer-fallow grain being consumed. J. D. Cox lost 90 acres, J. M. Hammonds 87 acres, Funk Bros. 82 acres and S. W. Howard between two and three acres. All the grain was insured. The loss over the insurance will be paid by the S. P. Co., which immediately sent a surveyor to the scene.

### ORANGE.

**WALNUTS.**—Anabeim Gazette, June 27: Reports from the walnut men of the Los Nietos valley indicate that this year's walnut crop will be at least 10% greater than that of last season. The nuts have set well and have passed the critical periods. The pest known as the "black spot," which causes the nut to fall prematurely, has wrought a great deal of injury this year, but not so much as last season, and it is expected it will do little or no further damage to the crop now growing. The greatest menace which the walnut men now anticipate is the burning of the nuts as is done when there is a long period of hot, sultry days. The burning process causes the shuck to adhere to the nut and in some cases damage the kernel. Generally the crop appears to be as abundant as the one on the trees a year ago, but when the additional year's growth of the trees is considered it is reckoned that the shipments for the coming season will be one-tenth more than than those of last year.

**CANNERY PRICES FOR APRICOTS.**—Anabeim Gazette, June 27: The cannery at this place will begin operations this morning on apricots. The crop hereabouts is turning out better than had been expected. Prices range from \$18 to \$22 per ton.

### RIVERSIDE.

**A GOOD HONEY CROP.**—Santa Ana Blade: The honey output of southern California will be large this season. The honey crop of the San Jacinto country alone is estimated at ten carloads.

**GRAIN HARVEST EXCEEDS EXPECTATIONS.**—Hemet News: Now that several harvesters are in the field, and hundreds of acres have already been cut, ranchers find from a conservative estimate that early sown wheat will average about eight sacks to the acre. The late sown wheat will produce a light yield, three to four sacks to the acre being a fair estimate. This will give what will be considered over half a crop, and after a month of unfavorable weather in May the ranchers hereabouts feel well pleased with the outlook. Barley is running ahead of what was expected. In the Moreno country the most unfavorable barley crop runs seven sacks to the acre, and in the most favorable sections it will give a phenomenal yield of twenty sacks to the acre. It is probable that barley will run evenly in other sections, as the long weeks of fog were beneficial to the barley crop. Ranchers are finding it difficult to handle their grain, as hands are hard to get.

### SAN JOAQUIN.

**FINE COTTON, BUT NOT PROFITABLE.**—Stockton Mail, June 27: A fine sample of cotton is exhibited by Wash Trabern. It was raised on the unland of his ranch, 16 miles south of town, from seeds sent him by a friend in Texas. It would grade as good middling and is equal in quality to the best upland cotton grown in Louisiana and Texas. Only a small space of ground was planted as an experiment, but the yield shows that Mr. Trabern's land would produce about a bale or 500 pounds to the acre, which is as large as the average product on the uplands in the south. Mr. Trabern says that cotton could not be raised here profitably, because there are no manufacturing, and the freight rates are too high to admit of transporting it to the markets in the East.

### SANTA CLARA.

**FRUIT DRYING.**—San Jose Herald, June 28: Fruit drying has begun on a large scale the present week and almost all the dryers are in operation. As with shipping and canning the season has been backward in opening, but it is now at its zenith, and apricots and peaches are being prepared for the market by the sun process in great quantities. Shipments of cherries have ceased for the season, with forty-two carloads as the total from this point as against 152 the past year. No green apricots and but few peaches will be shipped from the valley, the dryers and canneries offering a good and sure market for the growers. The peach crop is maturing very rapidly and the eastern market is now well supplied. Pears are developing and probably the next week may see some of the early Bartlett and other varieties on the way east.

**ROUGH ENCOUNTER WITH BEES.**—San Jose Mercury: Saturday M. Church was cultivating in his orchard, near Valley View, he drove under a prune tree which contained a swarm of bees which were hidden from his sight by the foliage. One of the horses happened to hit the limb on which the bees were gathered, bringing them down in a shower upon the horses' backs. Mr. Church took in the situation at once and put the team into a gallop through the orchard and under the lowest trees so that the branches soon brushed off the bees. There was some good running and not a little kicking by one of the

animals, but aside from being badly stung no damage was done. As the driver passed under the tree his hat was taken off by a limb and he shared with the horses in the shower. Luckily the brush soon combed the bees out, and with the exception of a few stings on the scalp he was none the worse.

**GOOD OUTLOOK FOR WINE GRAPE INDUSTRY.**—Gilroy Gazette: Choice wine grapes are said to be worth this season \$25 a ton, and we understand that in San Francisco dealers are offering to make contracts covering a term of years to pay \$20 a ton for all wine grapes that may be produced. The reason for this is that the phylloxera is destroying thousands of acres of vines each year. Sbrewd growers are planting vineyards of resistant vines, and by the time they come into bearing the production throughout the State will have become so limited that the output of the new vineyards will likely command good prices.

**SWEET PEAS GALORE.**—Gilroy Advocate: The Morse Seed Co. controls 1250 acres of the richest land in the valley south and southeast of Gilroy. The entire tract is under the supervision of Ah Him, who has been in the employ of the Morses for twenty-four years and is one of the most intelligent Chinamen in the State. At this season of the year the Morse Seed Farm is one of the chief attractions of the valley. Just think of sixty acres of sweet peas of about 100 varieties, all abloom! It is truly a magnificent sight. The varieties are separated by rows of carrots or lettuce. The most delicately tinted varieties are here seen in such bewildering profusion as to make the visitor halt with exclamations of wonder and pleasure. There is a variety of other flowers, including asters, poppies and verbenas. About 250 acres are in onions, 70 acres in lettuce and smaller acreages in tomato, parsnip, spinach and oyster plants.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, June 27: Orchard buying seems to have ceased. The packers are waiting for orders and quotations. Tree props are in plentiful evidence in many of the orchards. The prop is often the salvation of a good tree, and it pays to save good bearing trees. Apples are now making a rapid growth, and the cool nights are right for their proper development. There have been no spells of warm weather so far to hurt this year's apple crop. The Bellefeur crop of this valley is not going to be as heavy as was predicted four weeks ago, but it is going to be fair in size and every prospect is favorable that it will be an excellent one in quality. There are fine prospects for lots of four-tier stock.

**FINE BEET YIELD.**—Watsonville Pajaronian, June 27: The Pajaro valley beet crop is coming along fully up to the expectations of six weeks ago. The beet fields, from near Corralitos southeast to Pajaro, and from the ocean and San Andreas hills to the most eastern point of Pajaro valley, have never looked better. The long lines of beets show scarcely a miss, and they have a healthy color and a strong growth. Pajaro valley is out for its hanner beet crop this year, and it is very apt to have it. It will pour thousands and thousands of tons of sugar-laden beets into the slicers of the big mill at Spreckels.

**BARK PEELING ON A LARGE SCALE.**—Boulder Creek Mountain Echo: The work of bark peeling is now on in full blast on Newell creek for the Big Basin Lumber Co. Dan E. Smith of Sequoia has charge of the work and between forty and fifty men are employed. Somewhere between 1000 and 2000 cords of bark will be peeled. Men are already at work making trails and pitching the peeled bark together, preparatory for packing.

### STANISLAUS.

**CALVES DYING FROM UNKNOWN DISEASE.**—Modesto News: A disease unknown to the cattle owners in this section is killing off a large number of calves in portions of this county. All the way from Salida to Westport and on the west side of the San Joaquin river many calves have died. They do not die as suddenly as from some other diseases, but the fatality is great. A short time ago a State veterinary surgeon was in this section and reported the county free from disease. He has been again communicated with.

**HARVESTING FLAX CROP.**—Modesto News: The Pacific Fiber Co. is now making an experiment of flax raising in the sandy land three miles east of Turlock. The company has purchased the necessary machinery for the harvest of the flax crop and the transformation of the product into fiber. It is the intention to immediately erect the necessary buildings and proceed with the harvest. The company has 110 acres planted, and during the season has irrigated a part of the crop and part of it has not been irrigated. A good

crop is on all the land, that which was irrigated being equal to that which was not irrigated. This is probably due to the fact that we had heavy rains very late, for up to these rains it was inferior to the irrigated flax. The seed planted was imported from Belfast, Ireland, and cost 7 cents per pound. The experiment is one that has cost the company a goodly sum, but the returns promise to be satisfactory. Already the company has received many letters regarding its attempt from Eastern concerns who are interested in the enterprise, and the demand for the fiber seems to be large.

**PAINFUL ACCIDENT AT SKIMMING STATION.**—Modesto News: John Grant recently met with a painful accident at a skimming station of the Modesto creamery. Young Grant was passing in front of a steam pipe which had a piece of hose on its end to carry away the steam. The pressure of the steam was coming with too much force and blew the hose off the pipe, allowing the steam to strike Grant on the right side of the face. Dr. Evans was summoned to attend to the injuries and found the face and shoulders badly scalded and the right eye severely injured.

### TEHAMA.

**SUGAR BEETS DOING WELL.**—Red Bluff News: A gentleman who recently visited the beet fields of the Fimmel Company lands says that a few of the beets have been dug up to see how they were growing, and some of these had already attained a weight of four pounds. When the time for digging comes they are expected to weigh about six pounds. An estimate of the crop has been made, and this places the yield from 1500 acres at about 29,000 tons. The transportation charges are estimated at \$2.60 per ton, and this will amount to about \$75,000. To move the crop—estimated at fifteen tons per car—will require about 2000 cars, or, at thirty-five cars to the train, fifty-seven train loads, being nearly a month's work at two trains per day.

**FIFTEEN SACKS TO THE ACRE.**—Red Bluff News: George Dunn, who farms on a ranch near Tehama, had sixty acres in wheat that went fifteen sacks to the acre. Adjoining land, of the same quality of soil, produced only ten sacks per acre. Mr. Dunn is unable to account for the difference in the yield. This is the best crop the land has produced for a number of years.

### TULARE.

**GOOD YIELD OF POTATOES.**—Visalia Delta, June 27: Potato growers are in good spirits this season. The first crop has been a very satisfactory one. Dan Switzer has about thirty acres and he says he could not ask for a better yield. His experience convinces him that Maul's Thoroughbred and the White Star are among the best varieties to plant in this section.

**HAY DESTROYED BY SPONTANEOUS COMBUSTION.**—Tulare Register: Sunday morning while Henry Kelly was out looking after some water that was being used for irrigation, he happened to glance toward a stack of alfalfa hay in an adjacent field that had been put up wet. All at once there was an eruption in the top of the stack and flames shot up 40 feet or more, and in an instant the whole stack was enveloped in flames. It was still burning Monday. It was a pure case of spontaneous combustion. It was known that the hay had rotted and spoiled in the stack after its last wetting by the rain, but it was not supposed that it would go off like a blast of powder and burn up of its own heat; but it did.

**GIRL DRIVES A FOUR-HORSE HEADER.**—Tulare Register: Miss Alice Carpenter, one of the Tulare High School graduates, drove a four-horse header team for two days the past week, her brothers not being able to secure a driver, and she drove so well that they tried to persuade her to stay with the job; but having other duties to perform, she declined the offer. Two others of the class of graduates are cooking for harvester crews.

### VENTURA.

**CHICKEN WITH A WOODEN LEG.**—Ventura Independent: One of the many young chicks about the back door of a restaurant cut its foot on a tomato can about three weeks ago, and eventually the member was touched by blood poisoning, for it swelled rapidly and was painful. The chick could not use the foot at all. Oscar Brown amputated the leg half way to the knee. After turning the outer skin back, he tied the various ligaments and dressed the operation in genuine surgical fashion, patching up a temporary wooden leg until the leg healed.

**OJAI ORANGES.**—Santa Barbara Press: Some fine specimens of Matilija oranges are exhibited by George W. Bates, just returned from a two weeks' outing at that resort. The fruit is large, some of the oranges weighing two pounds each, and they have a sweet, delicious flavor.



## THE HOME CIRCLE.

### The Joy of the Hills.

I ride on the mountain tops, I ride;  
I have found my life and am satisfied.  
Onward I ride in the blowing oats,  
Checking the field-lark's rippling notes—  
Lightly I sweep  
From steep to steep;  
Over my head through the branches high  
Come glimpses of a rushing sky;  
The tall oats brush my horse's flanks;  
A bee looms out of the scented grass;  
A jay laughs with me as I pass.

I ride on the hills, I forgive, I forget  
Life's hoard of regret—  
All the terror and pain  
Of the chafing chain.  
Grind on, O cities, grind:  
I leave you a blur behind.  
I am lifted elate—the skies expand:  
Here the world's heaped gold is a pile of  
sand.  
Let them weary and work in their narrow  
walls;  
I ride with the voices of waterfalls!

I swing on as one in a dream—I swing  
Down the airy hollows, I shout, I sing!  
The world is gone like an empty word:  
My body's a bough in the wind, my heart  
a bird! —Edwin Markham.

### Another Chance.

How oft this moan ariseth, "Fate is to us  
unkind!  
No splendid opportunity, no more new  
worlds to find!"  
Methinks our eyes are blinded. To-day a  
beggar seems;  
A prince he comes to-morrow, fulfilling all  
our dreams.  
A world of wonders waiting for one with  
seeing eyes;  
For one to pluck the secrets from nature's  
strange disguise;  
For one to live life's noblest; for one to  
sing life's song;  
For one to lead in fighting new, hydra-  
headed wrong.  
'Tis but with courage, open-eyed; face  
duty all the way;  
And work to earn the triumphs we're  
longing for to-day!

—Margaret Stewart Sibley.

### An Indian Fakir's Trick.

An officer of the British army, who served in India with the Seventh and the Fourteenth Hussars, was spending a few weeks in New York. Some friends were talking with him about India and his experiences there, and the conversation turned to Indian fakirs and their wonderful performances.

"These fellows do perform some extraordinary tricks," said the British officer; "but, extraordinary as they are, the tricks are not so fearfully wonderful as some of the stories of them which are brought away from India by the tourists who learn all about India and its people in the course of a few weeks' sojourn in some of the coast towns.

"As a matter of fact, the greatest of the fakirs are never seen in the towns and cities. Their religion and their superstition will not permit them to wander from their native haunts, and only those who have traveled or lived in the wildest and most remote parts of India have witnessed the performances of the really great tricks of the fakirs.

"You must remember at the outset that the real thing, to use an Americanism, in the way of a Hindoo fakir is a man of secrets and of strange habits. He loves, or affects to love, solitude, and he works upon the superstitions of his fellows in performing what are regarded by the other Hindoos as sure-enough miracles. He lives in comparative seclusion, existing on heaven knows what.

"Of course, at every opportunity, he extorts whatever he may from his fellows, but that is not much. And, shunning as he does the cities, it is only for a venturesome foreign hunter that he may now and then perform and get any considerable backsheesh. In his native state he is the filthiest human being I ever clapped my eyes on, and by long habit he has fallen into

a chronic state of weirdness, so to speak.

"Report travels much more rapidly than one would suppose in the mountains of India, and once a party of foreign sportsmen or travelers appears in the up country, a fakir is not long in striking the spoor, and he keeps to it until he comes up with the strangers. At such times the fakir usually travels with a small boy and a dirty bag filled with a promiscuous jumble of nuts, shells, trick paraphernalia and what not.

"The first time I ever met a no-discount fakir was in a wild, unfrequented part of India, where two other officers of the regiment, an army surgeon and myself had gone on a hunting trip. We spent the day beating for a tiger, which got away, and had returned to camp tired and out of sorts. Taking an early dinner, for we were horribly hungry, we sat down outside the tent to smoke our cheroots.

"Suddenly, just before sundown, we noticed an uncanny-looking person coming toward us, grinning like a black devil, salaaming at every step, and mumbling something which none of us could understand. We knew, of course, that our visitor was one of the mountain fakirs, and we calmly waited for him to proceed to business.

"As he put down his bag with great deliberation, the boy accompanying him curled himself on the ground and seemed to be paying attention to nothing in particular. After a little, the old codger produced, seemingly from nowhere, a ball of ordinary cotton string, which had once been white, such string as shopkeepers ordinarily use to tie up light packages with.

"The man's hair was gray, and his hide was as black as Erebus. He wore a dirty turban and loin cloth, which two articles constituted his apparel. The boy's outfit was no less elaborate.

"After tossing the ball of string about for a while—it was about the size of a billiard ball—he threw it high into the air, retaining the free end of the string in his hand. Up and up and up went the ball, growing smaller and smaller the higher it traveled, until it disappeared from sight altogether. To all appearances it had sailed up until it had reached the nearest stratum of clouds and disappeared behind it. It was the mightiest ball throwing we had ever seen, and was quite sufficient to attract our attention to anything that the old boy might subsequently do—and that was just what he wanted.

"As soon as the ball had disappeared the fakir let go the free end of the string, and there we had a line of cotton twine extending from about 5 feet from the ground up to the Lord knows where. When the old man found that the ball remained up in the air, refusing absolutely to come down, no matter how wildly he gesticulated or how loudly he yelled at it, he was apparently much annoyed.

"He tugged and tugged at the cord, but he couldn't pull the cord out of space, and, as an evident last resort, he called the boy, told him to climb the cord and bring the ball down. Then we saw the spectacle of a boy, 12 or 14 years old, climbing hand-over-hand up a line of cotton twine about the size of a large pin.

"Up and up, higher and higher, the urchin went, climbing as a sailor climbs a rope, until he, too, had disappeared behind the clouds which hid the ball. When last we saw him, he looked to be just about as big as the ball did when it disappeared.

"As soon as the urchin disappeared there was more trouble for the fakir. The boy appeared very well satisfied with the roosting place he had found and the old man was no more successful in getting him back to earth than he had been with the ball of twine. Then we did have a sample of splendid rage.

"The old rascal worked himself up into a perfect fury. He yelled, danced and gesticulated and gave the best exhibition of a human demon that I ever saw. By way of heightening the effect and increasing our interest in the

show, he dropped into broken but intelligible English, the substance of which was:

"Am I to be made an idiot of by a ball of string and a fool by a chokera (small boy)? Allah forbid! I will them both teach that they may not trifle with one so old and so wise."

"Then rushing to the filthy old bag that had been lying all this time on the ground, he thrust an arm into it and drew forth the most murderous looking knife I ever saw. It had a curved blade about 9 inches long, 3 inches across at the hilt and tapering to a fine point. Placing the knife between his teeth and grasping the twine with both hands, the old boy, showing marvelous agility for one of his apparent age, went up the cord as the boy had, hand-over-hand, and in less time than it takes to tell it, he, too, had disappeared from view.

"He had us all going by this time, and we just sat there gaping up into the air like a lot of precious idiots. There was a second's absolute silence, and then an agonizing yell, so piercing that it sunk into one's very bones. Another second, which seemed like an age, and then we saw a dark object come hurtling down from the sky. Down and down it came, until it landed only a few feet from us with a sickening sort of thud.

"Looking to see what it was, we saw the head of the boy who had climbed the cord lying there, severed from the body at about the middle of the neck. A closer examination showed that the face wore a horrible expression, while the scarlet blood poured from the divided arteries and the dark venous blood from the veins. The twitching of the newly-cut muscles and the wind-pipe, and the cleanly severed joints of two of the cervical vertebrae were quite plain to the army surgeon and to the rest of us, all of whom knew a little of anatomy from the field hospitals.

"We hadn't by any means got over the shivery feeling we experienced at seeing the head of the late urchin, when down came an arm, cut off through the shoulder joint and giving all the anatomical relations in that part quite plainly. A moment later the other arm dropped at our feet, and an examination showed that it had been cut off in exactly the same way. The doctor said the old rascal carved cleverly enough to have been a surgeon at the Royal College.

"We were about ready for anything after that and so were not particularly surprised when a leg, severed at the hip joint and exposing the head of femur, the muscles twitching just as you may have seen them twitch in a freshly killed animal, came along. The other leg followed in due time and then came the trunk.

"A moment later the old man was seen coming down the string, and when he dropped to the ground from the end of it he was literally covered with gore from head to foot. The knife, still held between his teeth, was fairly dripping with blood. His eyes appeared wilder than ever, his features drawn, and he paced back and forth for a few seconds like a chained tiger.

"Then he collected the head, limbs and trunk and tossed them into the old bag. While watching this action, we lost sight of the string and the knife and never saw them again. Slinging the bag over his shoulder, he walked away. We knew this was only a bluff, because he hadn't yet received any backsheesh, and we knew he never would depart without that.

"He had only moved off a few paces when we saw that something was moving inside the bag. The old man stopped, put on a surprised expression, put the bag down on the ground, and in a moment out crawled the boy, as sound in wind and limb as he had ever been.

"The boy began to smile, and the old man, smiling and salaaming, came toward us for his money. This he got in a very liberal amount, and off he went, leaving us standing there, mystified, confused and flabbergasted.

"We looked about for traces of the recently committed tragedy, but where the ground had been free with blood a

moment before not a trace of it was left. There was not the slightest bit of doubt that the boy had been carved up and there was not the slightest doubt that he had as miraculously come to life again.

"About the carving, the rest of us might have been mistaken, but you couldn't fool the doctor. He had been cold-blooded enough to pick up the different members of the body as they came tumbling down from the sky, had examined them and was perfectly positive that the dismemberment had taken place and had been the work of a skillful surgeon, or student of anatomy. That was one of the few performances that I ever saw of the real, genuine Hindoo fakirs of the Indian wilds."

"But how do you account for it all?" asked one of the British army officer's friends.

"Why, there is only one way to account for it," was the reply. "We were simply mesmerized or hypnotized by the old boy and placed in such a mental state that we imagined the whole performance really had been enacted."

"But how about the army doctor, who handled the dismembered parts?" asked some one else.

"Oh, he was befuddled just like the rest of us. He thought he handled stray arms and legs and heads and trunks, whereas he didn't do anything of the kind."

"Maybe Englishmen in India can become thus mentally twisted," said the first inquirer; "but I'm blamed if I believe anybody else can. Either you saw a miracle performed or the whole blessed lot of you were jagged."—New York Sun.

### Modern Educational Methods.

TO THE EDITOR:—I heard a little story yesterday about an observant, if not mathematical, boy, that I thought might interest your readers, seeing all are concerned with educational results and all concur that the chief use of book learning is to assist in developing and rightly directing brain power:

Dramatis personæ: Teacher and Tommy.

Teacher to Tommy (who is not over ready at abstract mathematics)—Two and two, Tommy, are how many?

Tommy (after deep pondering)—Four, sir.

Teacher—Good boy! Now I wonder if you can tell me what five times two would make?

Tommy (sadly and slowly)—Dunno, sir.

Teacher—Try again, Tommy.

Tommy—Dunno, sir.

Teacher—Now, Tommy, suppose your father were to give your mother five dollars (counting his five fingers for the five dollars), and then give her another five dollars, what would she have then?

Tommy (very readily)—Fits, sir.

Evidently Tommy had his bump of observation cultivated, if not his faculty for figures.

EDWARD BERWICK.

Monterey, June 17.

### The Boy Wanted in Business.

"What kind of a boy does a man want in business?" was asked of a merchant.

He replied: "Well, I will tell you. In the first place he wants a boy who don't know much. Business men generally like to run their own business, and prefer some one who will listen to their way rather than teach them a new kind. Second, a prompt boy, one who understands seven o'clock is not ten minutes past. Third, an industrious boy who is not afraid to put in extra work in case of need. Fourth, an honest boy—honest in service as well as matters in dollars and cents. And fifth, a good-natured boy, who will keep his temper, even if his employer does lose his now and then."

SHE—"Of course every woman likes to be flattered."

He (with a meaning look)—"But there are women whom it is impossible to flatter."



### Impostors Among Animals.

William Morton Wheeler, professor of zoology in the University of Texas, has an illustrated article in the July Century, on the subject of "Impostors Among Animals."

The Shaksperian conception of the human world as a stage may be expanded to include the animal world as well. Like ourselves, animals enter on the struggle for existence with a modicum of equipment in figure, complexion, voice, and demeanor, and with the assignment of a definite role to play in the melodrama of life. Hence we are not surprised to find that many of our four, six, and eight-footed competitors have, figuratively speaking, attained to some proficiency in the art of imposition while endeavoring to gain a foothold in the world, i. e., the opportunity of feeding, mating, and leaving offspring to repeat the same performance continuously.

It must have been some such reflection as this which led Henry Drummond to remark that "Carlyle in his blackest visions of 'shams and humbings' among humankind never saw anything so finished in hypocrisy as the naturalist now finds in every tropical forest. There are to be seen creatures, not singly, but in tens of thousands, whose every appearance, down to the minutest spot and wrinkle, is an affront to truth, whose every attitude is a pose for a purpose, and whose whole life is a sustained lie. Before these masterpieces of deception the most ingenious of human impositions are vulgar and transparent. Fraud is not only the great rule of life in a tropical forest, but the one condition of it."

Drummond's statements are perhaps a little misleading without some qualification, for animals are not impostors in the ordinary sense of the term, since they are, of course, perfectly unaware of appearing under a deceptive disguise. Moreover, what is true of animal life in the tropic is also, in great measure, true of animal life in other regions of the globe.

In the development of deceptive disguises—disguises which affect the form, attitude, and color, but largely the color, of animals—nature appears to have proceeded along two different paths, one of which is direct and relatively easy, the other circuitous and much more difficult. The easy path, which may be considered first, is that of protective resemblance pure and simple, i. e., an approach in the animal's form color, and attitude to some object in the surroundings. Such an approximation can hardly fail to be of the greatest advantage, since the animal thereby merges so completely with its environment as to pass unobserved by its enemies or by its prey. This alternative has led in two directions, to a defensive and an aggressive form of resemblance.

Every sportsman has been deceived by the close resemblance of birds and other animals to the soil and vegetation. It would be easy, moreover, to show that many reptiles, frogs, and fishes, and very many of the lower animals, exhibit similar adaptations. It is also well known that some of these creatures, like the chameleons, many tree frogs, cuttlefishes, and shrimps, can actually change their colors to make them harmonize with the exact tints of the vegetation or soil on which they are living. But no animal can compare with the insects and spiders in the detailed perfection of their protective disguises, or in the frequency of adopting this method of eluding enemies or of stealthily approaching prey. This is true notwithstanding the fact that active color-changes like those of the chameleon are scarcely known to occur among insects.

Many of the most striking examples of protective resemblance among insects are the result of the very intimate association of these animals with the flora of our planet. Especially is this true of insects which live exposed on the vegetation. There is really no portion of the plant excepting its roots and fruits which is not copied by some insect, often with the most astonishing faithfulness to details. Hosts of moths

copy the rough lichen mottled bark of trees; the walking-sticks and looping caterpillars copy the twigs; the green leaves are imitated by the katydids and the marvelous leaf insects (Phyllium) of the East Indies, while the dead leaves are portrayed by many moths and butterflies, a form of resemblance culminating in the famous Kallima butterflies of southern Asia. Striking resemblances to thorns and knots are to be found among spiders and leafhoppers (Membracidae), while even the flowers may be copied, as in the case of the pink orchid-like mantis (Hymenopus) of India, and several other species. The roots of plants are not copied because they are not exposed to view, and an attempt to resemble the exposed seed or fruit would be only an invitation to birds to destroy any species that might be so bold as to vary in this direction.

### Emergency.

This is a fine game for a party composed of old and young, grave and gay, for all present may be invited to join, says Housekeeper. Two leaders are selected who proceed to choose sides, and the players are seated on opposite sides of the room facing each other.

Before the arrival of the guests, slips of paper containing questions and answers must be prepared. These should be of a character indicated by the name of the game. For instances, "What would you do if a robber demanded your money?" or, "What would you do if your switch fell off?" or, "What would you do if you lost your head?"

These questions are placed in a box by themselves, and there must be many more than enough to go around.

The answers are in another box, and it is not necessary that they should fit the questions, although they should all be "emergency" replies. I'd scream for help, "I'd kill the dog," "I'd eat my hat," "I'd have hysterics," are all good for the purpose.

The questions are then passed to the players on one side of the room, each of whom draws one, and the answers are passed to the opposite players. A player on the "question" side advances to a position in the center of the room, and the leader on the opposite side sends one of his players to meet him.

The questioner asks his question, and his opponent replies according to the answer on the slip of paper he has drawn. All the other players may laugh, but if either of these two are caught smiling, he is immediately captured by the opposite leader, who moves his prisoner's chair to his own side of the room. The idea is to see which side will get most "prisoners" during a certain length of time.

Each questioner may ask his question three times in succession, and he can be as comical as he pleases in his inflections, so long as he does not smile. His opponent must repeat his reply each time and if he can make the questioner laugh by so doing, he wins a prisoner for his side. If neither have smiled when the question has been asked and answered three times, both return to their seats, and the next two players take their places in the middle of the room.

To read these directions one might not consider this game very funny; but to see two sensible persons standing in the middle of the room, glaring at each other, and to hear one gravely ask, "What would you do if you were arrested for drunkenness?" and the other fiercely reply, "I'd take my hat off to the cow," is quite apt to provoke a smile, no matter how sedate you may be.

It chanced, once, that a lady drew the question, "What would you do if you lost your switch?" and she had to propound it to a dignified gentleman whose head had been bald for years. She managed to get through without smiling, but the reply he had drawn was, "I'd yell for mamma," and he gave it in a tone that she found irresistible. She went over to the enemy, and her opponent was left to face another questioner. He drew

another reply from the box, and gravely said, "I'd eat my hat," when asked what he would do if his hostess should faint.

The leader decides whether a player is to meet more than one opponent, or whether it is best to call up some one else, and it is not necessary that the players take turns. The player on the "question" side takes the floor, first, and that gives the leader of the opposition an opportunity to select some one who can best meet him; for that reason the game should not be finished until each side has drawn the questions. Put the slips containing questions and replies back in their respective boxes, and mix them well. The different combinations will be found quite as amusing as if neither had been heard before. There should be about twice as many of both questions and answers as there are guests, so that there may be plenty to draw from in case the leader should allow one of his players to meet a number of the "enemy."

"No, I never shall forgive him," said old Mr. Simington, referring to the young man with whom one of his daughters had eloped. "The die is cast!"

"But," said the friend who had gone to intercede in behalf of the lovers, "you must admit that his character is good, that he stands high in business circles and that his habits are excellent. Most men would be proud to have such a son-in-law."

"I admit all that; still, I shall never forgive him."

"Why not?"

"Because he took the youngest and prettiest one in the bunch. Why did he not run off with one of her older sisters, confound him!"

"The reason some men don't get along happily," said Mr. Meekton, "is that they don't know how to manage a wife."

"You know this?" was the skeptical query.

"Certainly. It is the simplest thing in the world. All you have to do is to say 'yes' whenever she wants anything, and always let her have her own way."—Washington Star.

"Who married you?" asked the justice of a colored citizen, who had been brought before him for some domestic trouble.

"You did, sah," was the reply, "but I ain't never voted for you sence!"—Atlanta Constitution.

There ain't no use in grievin'

Because it's dark to-day;

Life ain't no path o' roses—

You've got to weed your way.

—Atlanta Constitution.

### DOMESTIC ECONOMY.

#### Tomato Catsup.

TO THE EDITOR:—I would like a good recipe for making tomato catsup. If you can send me one through the columns of the PACIFIC RURAL PRESS, you will oblige me and doubtless many others.—CHAS. RICHARDSON, Colusa.

This gives a good opportunity for readers to compare their favorite recipes. We are willing to paint our columns red with catsup recipes for a while.

#### Domestic Hints.

FISH CHOWDER.—A four-pound had-dock, skinned, the flesh cut from the bones and divided into 2-inch pieces. Cover the head and bones with cold water and boil half an hour. Fry four slices of fat salt pork and two small onions sliced; skim them out, pour in the strained bone water, boil and add one quart sliced potato. Cook ten minutes, add the fish, one tablespoonful salt and one-half teaspoonful white pepper. Thicken one quart hot milk with two tablespoonfuls each flour and butter cooked together, and pour it into the kettle. Do not break the fish

by needless stirring. Split six butter crackers, put them in the tureen and pour chowder over them.

PUREE OF DRIED WHITE BEANS.—Pick over and wash a pint of beans and soak over night. In the morning drain off the water, put the beans into a saucepan with cold water to cover them, and cook until tender—a little more than an hour. Press through a sieve; add a generous tablespoonful of butter, salt and pepper to taste, put into a saucepan, make very hot and serve.

FRUIT PUFFS.—Delicious fruit puffs may be made by adding to the above mixture one-half cupful of washed and floured huckleberries or the same amount of chopped raisins, currants or dates. If this is done the batter should be prepared as described above, and before adding the white of the egg the fruit should be beaten in one cupful of ice-cold milk or water and an additional three-quarters of a cupful of graham flour. When it is light and foamy fold in the white of the egg as before and bake.

MUSHROOMS IN CHAFING DISH.—Wipe or wash if needed, peel, cut stems fine, and if tough stew in a little milk. Slice or quarter the tops, cook them five minutes in plenty of butter, then add cream sufficient to make a sauce, sprinkle with salt and pepper, add the stems and simmer a few minutes, or till tender, adding more cream if needed. There should be sauce enough to moisten the toast. This is one of the simplest and most delicious ways of cooking mushrooms, especially the late varieties.

BOILED SALAD DRESSING.—For a boiled salad dressing that may be kept in a cold place for a long time beat the yolks of two eggs until they are creamy, adding to them one-half teaspoonful each of mustard and salt. Then beat in slowly four tablespoonfuls of melted butter and six tablespoonfuls of vinegar. Cook the mixture in a double kettle until it thickens. When it is cold and just before serving fold in one cupful of cream. This may be served on cabbage or any other salad where mayonnaise is usually employed.

#### Hints to Housekeepers.

Both carbolic acid and naphtha are said to be effectual remedies for buffalo bugs, black carpet beetles and all other bugs and vermin that may trouble the most fastidious housekeeper at times. Closets, cracks and upholstery seams should have a plentiful application several times a week until the pests disappear. The naphtha or gasoline must not be used where there is fire or gas burning.

Cheese paste for sandwiches is easily prepared. Boil two eggs hard, separate the yolks from the whites, mash the yolks smooth and chop the whites very fine; mix and put through a vegetable press, then add butter the size of a small egg and three heaping tablespoonfuls of grated American cheese. Beat together until it is a fine, smooth paste. If not salt enough add a little, and also dry mustard, if liked.

It is not so easy to keep flowers fresh when coming from a distance in warm weather. A recent box sent into the city will serve as a suggestion to others. Large leaves of rhubarb were placed on the bottom of the box, and again over the flowers, damp cotton batting about the stems and the whole covered with paraffine paper. All air was thus excluded, and the moisture retained, so that when the flowers arrived they were as fresh as though just sprinkled.

To make a delicious cucumber salad, pare the cucumbers and put them into ice water. Whip stiff one and one-half cupfuls of cream, and fold into it four tablespoonfuls of lemon juice, the same quantity of horseradish, a teaspoonful of salt and two or three dashes of paprika. Stand this dressing on the ice. Just before serving, dry the cucumbers in a napkin. Cut them in thin slices; dress with oil, vinegar, salt and pepper, and arrange on bed of lettuce. Cover with the whipped cream, and send any that may remain to the table in a bowl.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, July 2, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	July.	Sept.
Wednesday.....	65½@66½	66½@67½
Thursday.....	66½@67½	67 @ 67½
Friday.....	66½@67½	67 @ 67½
Saturday.....	66½@67½	66½@67½
Monday.....	66½@67½	67 @ 67½
Tuesday.....	64½@64½	65½@66½

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	July.	Sept.
Wednesday.....	5s 6¼d	5s 6¼d
Thursday.....	5s 6¼d	5s 6¼d
Friday.....	5s 6¼d	5s 6¼d
Saturday.....	5s 6¼d	5s 6¼d
Monday.....	5s 6¼d	5s 6¼d
Tuesday.....	5s 6¼d	5s 6¼d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 02 @ 1 01½	—
Friday.....	1 00½@1 00½	—
Saturday.....	1 00½@1 00	—
Monday.....	1 00½@ 99½	1 04½@—
Tuesday.....	1 00½@1 01½	1 05½@—
Wednesday.....	—	—

## WHEAT.

There has been no active trading in wheat in this center since last review, and absence of firmness has been much the same prominent feature as previously noted. It was the exception where shippers named over 96½c. for No. 1 wheat, delivered at Port Costa. Old milling wheat was in light stock and in fair request, but for best \$1.05 was an extreme hardly warranted as a quotation, sales over \$1.03½ being difficult to effect. There are few mills now running on full time, and the demand on milling account will doubtless continue light until new wheat proves sufficiently seasoned to be desirable. Foreign markets failed to develop firmness, despite prospects of France and Germany being liberal buyers of American wheat this year. In the speculative market there was an improvement in values immediately following last review, Dec. wheat touching \$1.02, but the advance proved quite temporary, sales being made same day as low as \$1.01½, and two days later this option sold down to \$1.00. Since then there have been no marked fluctuations, and business in futures has been of much the same light order as in the spot market. Tuesday noon the option market was slightly firmer, Dec. wheat touching \$1.01½.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, 99½@1.02.	
May, 1902, delivery, 1.04½@1.05½.	
Tuesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.00½@1.01½; May, 1902, \$1.05½@—.	
California Milling, old.....	\$1 00 @ 1 05
Cal. No. 1 shipping, alongside.....	95 @ 97½
Oregon Valley.....	95 @ 1 00
Washington Blue Stem.....	97½@1 02½
Washington Club.....	95 @ 97½
Of qualities wheat.....	92½@ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	65½d@66½d	58½d@59½d
Freight rates.....	40¢@—	36¼@37¼s
Local market.....	\$1 05@1 07½	95 @ 97½

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

During the past ten cereal years wheat exports were:

Season.	Centals.	Value.
1900-1901.....	8,000,872	\$ 8,276,078
1899-1900.....	6,500,875	6,666,874
1898-1899.....	2,286,760	2,758,994
1897-1898.....	10,112,641	15,261,951
1896-1897.....	10,101,592	13,042,688
1895-1896.....	10,293,957	10,629,629
1894-1895.....	9,605,296	8,607,135
1893-1894.....	8,966,268	9,449,612
1892-1893.....	10,553,619	13,825,632
1891-1892.....	13,092,364	22,089,728

Of the 8,810,451 centals wheat received the past season, 37,443 centals were from Oregon and Washington, against 194,323 centals in previous season. Included in the total receipts of flour—1,654,207 barrels—there were received from Oregon and Washington 403,277 barrels, against 435,972 barrels in previous season. Total shipments of wheat and its equivalent in flour from this State for the past year aggregate 552,922 short tons, with a valuation of \$11,588,500. Vessels to the number of 140 were dispatched with wheat con-

stituting the entire or main cargo. During preceding season the shipments of wheat and its equivalent in flour were 489,618 short tons, valued at \$10,781,240, and 127 vessels were dispatched.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on June 1st and July 1st:

Tons—	June 1st.	July 1st.
Wheat.....	88,213	*64,359
Barley.....	13,546	†14,662
Oats.....	1,458	1,558
Corn.....	58	470

\*Including 50,460 tons at Port Costa, 13,332 tons at Stockton.

†Including 9822 tons at Port Costa, 3645 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show a decrease of 23,855 tons for the month of June. A year ago there were 126,525 tons wheat in Call Board warehouses.

## FLOUR.

Quotable values continue at same range as last noted, but market lacks strength. Indications at the moment are more favorable for prices receding than advancing in the near future. To effect free transfers at this date, decided concessions would have to be granted buyers. Spot supplies are more than sufficient for immediate requirements.

Superfine, lower grades.....	82 25@2 40
Superfine, good to choice.....	2 50@2 75
Country grades, extras.....	3 00@3 25
Choice and extra choice.....	3 25@3 50
Fancy brands, jobbing.....	3 50@3 65
Oregon, Bakers' extra.....	2 75@3 15
Washington, Bakers' extra.....	2 75@3 25

## BARLEY.

Market has ruled quiet most of the time since last report. There were no heavy offerings, but there was more than custom could be found for at full current rates. Some barley is going aboard ship for Europe, and prospects are favorable for a very good foreign demand, especially if ships can be secured to carry the grain forward at anything like reasonable freight rates. Local brewers and maltsters have so far done little or nothing in new barley, and very seldom do operate so early in the season. Millers are not taking hold of new feed very freely, most of it not being sufficiently seasoned for immediate crushing.

Feed, No. 1 to choice.....	70 @ 72½
Feed, fair to good.....	67½@ 70
Brewing, No. 1 to choice.....	77½@ 82½
Chevalier, No. 1 to choice.....	—
Chevalier, No. 2.....	—
Chevalier, poor.....	—

## OATS.

Old oats are in light stock and are hardly quotable in a regular way. New Reds are being offered rather freely, both for spot delivery and to arrive, with market quite weak, quotable rates being at a materially lower range than last noted. Not many new Whites or Grays are looked for until Oregon and Washington begin to forward, which will be about the middle of August. Blacks are lower.

White Oats, fancy feed.....	1 40 @ 1 45
White, good to choice.....	1 32½@1 37½
White, poor to fair.....	1 20 @ 1 30
Gray, common to choice.....	1 20 @ 1 40
Milling.....	1 42½@1 47½
Surprise, good to choice.....	1 45 @ 1 50
Black Russian.....	95 @ 1 05
Red.....	95 @ 1 10

## CORN.

Market is practically bare of Large White, recent Central American orders having absorbed the bulk of supplies of this variety. There is not much Large Yellow on hand, and that offering is mainly Eastern product. Small Yellow continues scarce and high.

Large White, good to choice.....	1 35 @ 1 40
Large Yellow.....	1 27½@1 30
Small Yellow.....	1 55 @ 1 60
Eastern, in bulk (carload lots).....	1 20 @ 1 22½

## RYE.

Values for this cereal remain at a low range, with very little positive inquiry at present.

Good to choice, new.....	77½@ 80
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## BUCKWHEAT.

There was some of ordinary quality from Washington offered at \$1.60. For strictly choice \$2 is being asked, but this figure is not obtainable in a wholesale way.

Good to choice.....	1 60 @ 1 75
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## BEANS.

The tendency on White beans is to easier figures and to a wider range of values than have been lately current. The disposition to grant material concessions to buyers, however, is confined mainly to offerings which are more or less defective in quality. It is the exception where any special or undue selling pressure is being exerted on strictly choice stock. There was a moderate inquiry for Pink beans,

causing a little better tone to prevail for this variety, but there was no improvement in quotable values. The market as a whole was quiet, and will likely be so for a month or six weeks to come, when earliest beans of new crop will be due.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 50 @ 4 90
Lady Washington.....	3 75 @ 3 90
Butter.....	—
Pinks.....	1 40 @ 1 65
Bayos, good to choice.....	2 80 @ 2 50
Reds.....	3 00 @ 3 25
Red Kidney.....	4 25 @ 4 50
Limas, good to choice.....	6 25 @ 6 40
Black-eye Beans.....	2 75 @ 3 00
Horse Beans.....	1 00 @ 1 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

## DRIED PEAS.

Next to nothing doing in either Niles or Green peas. Values are quotably unchanged, but for the time being are largely nominal.

Green Peas, California.....	2 65 @ 2 80
Niles Peas.....	1 60 @ 1 75

## WOOL.

While the market is far from being in satisfactory shape for the selling interest, there is considerable inquiry and more doing than at any previous date the current season. Some wools have changed hands which had been previously wholly neglected. Prices show no appreciable change from those last quoted. The demand is mainly for fine wools, coarse and medium receiving scarcely any attention.

	SPRING.
Humboldt and Mendocino.....	14 @ 15½
Humboldt and Mendocino Lambs.....	11 @ —
Northern, free.....	12 @ 13
Northern, defective.....	10 @ 11
Middle Counties, free.....	10 @ 11
Middle Counties, defective.....	9 @ 10
Southern, 12 mos.....	8 @ 9
Southern, free, 7 mos.....	7 @ 8
Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## HOPS.

There are so few hops now in stock that business is necessarily restricted to small jobbing operations. Quotations for the time being are based on prices realized by jobbers. Growers do not appear to be making any contracts for forward delivery, preferring to wait until the hops are ready to be marketed.

Good to choice 1900 crop.....	15 @ 30
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## HAY AND STRAW.

New hay of most kinds is arriving in sufficient quantity, as compared with the demand, to give the market an easy tone. Offerings are largely common to medium grades of Wheat and Oat. High grade Wheat is not plentiful. Alfalfa is in light stock.

	NEW CROP.
Wheat, good to choice.....	8 00@10 00
Wheat and Oat.....	7 50@ 9 50
Oat.....	6 50@ 8 00
Oat, stained.....	4 00@ 5 50
Barley and Oat.....	6 00@ 8 00
Alfalfa.....	6 00@ 8 00
Clover.....	5 00@ 6 00
Stock.....	5 00@ 7 00
Compressed.....	8 00@12 00
Straw, ½ bale.....	35 @ 45

## MILLSTUFFS.

Prices in this department have not changed materially since our last issue. Bran remains in limited supply, with the bulk of offerings in few hands. The only description of mill feed for which the market shows weakness is Rolled Barley, and this article is not offering at materially lower figures than were current a week ago.

Bran, ½ ton.....	17 00@17 50
Middlings.....	18 00@20 00
Shorts, Oregon.....	17 00@18 00
Barley, Rolled.....	16 00@16 50
Cornmeal.....	27 00@27 50
Cracked Corn.....	28 00@28 50

## SEEDS.

The same inactivity previously noted is being experienced. Stocks and demand are both very light for the time being. Values are in consequence not very well defined. For new crop Mustard to arrive 3½c is asked, with no bids reported.

	Per ctt.
Mustard, Trieste.....	—
Mustard, Yellow.....	—
Flax.....	2 50@3 00
Alfalfa, Utah.....	—
Alfalfa, California.....	—

	Per lb.
Canary.....	3¼@ 3½
Rape.....	2 @ 2¼
Hemp.....	3 @ 3¼

## BAGS AND BAGGING.

Market for Grain Bags has continued against buyers, with no heavy quantities offering. While it is extremely doubtful about supplies proving inadequate for requirements, it looks as though it would

not be necessary to carry any great amount of stock into next season. Asking rates were advanced Monday to 8c for Calcuttas.

Calcutta Grain Bags, huyer June-July.....	—@—
Calcutta Grain Bags, spot.....	8 @—
San Francisco Grain Bags, 22x36, spot.....	7¼@ 7½
State Prison Bags in lots of 2000, ½ 100.....	—@—
Wool Sacks, 4 lbs.....	32¼@35
Wool Sacks, 3½ lbs.....	30 @ 32¼
Fleece Twine.....	7¼@—
Gunnies.....	—@12¼
Bean Bags.....	4¼@ 5¼
Fruit Sacks, cotton.....	6¼@ 7¼

## HIDES, PELTS AND TALLOW.

Conditions have not changed materially in this market during the week under review. Hides are in very fair request at current rates, more particularly dry stock. Pelts are selling a little more readily than for some time past, but at no appreciable advance. Tallow is not lacking for custom and current values are being well maintained.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 50 lbs.....	10 @—	8¼@—
Medium Steers, 48 to 50 lbs.....	9 @—	7¼@—
Light Steers, under 48 lbs.....	8 @ 8¼	7 @—
Heavy Cow Hides, over 50 lbs.....	8¼@ 9	7 @ 7¼
Light Cow Hides, under 50 lbs.....	8 @ 8¼	7 @—
Wet Salted Kip.....	9 @—	8 @—
Wet Salted Veal.....	9 @—	8 @—
Wet Salted Calf.....	10 @—	9 @—
Dry Hides.....	15¼@16	13¼@—
Dry Kip and Veal, 11 to 16 lbs.....	15 @—	12 @—
Dry Calf, under 4 lbs.....	16 @—	14 @—
Salted Horse Hides, large.....	2 50 @—	—
Salted Horse Hides, medium.....	2 00 @—	—
Salted Horse Hides, small.....	1 00 @—	—
Dry Horse Hides, large.....	1 75 @—	—
Dry Horse Hides, small.....	1 00 @—	1 25 @—
Dry Colts' Hides.....	50 @—	—
Pelts, long wool, ½ skin.....	75 @—	1 00 @—
Pelts, medium, ½ skin.....	50 @—	75 @—
Pelts, short wool, ½ skin.....	30 @—	40 @—
Pelts, shearing, ½ skin.....	10 @—	25 @—
Deer Skins, best summer.....	35 @—	—
Deer Skins, good medium.....	— @—	30 @—
Deer Skins, thin winter.....	— @—	10 @—
Elk Hides.....	10 @—	12 @—
Tallow, good quality.....	4¼ @—	4¼ @—
Tallow, No. 2.....	3¼ @—	3¼ @—
Goat Skins, perfect.....	30 @—	37½ @—
Goat Skins, damaged.....	10 @—	20 @—
Kid Skins.....	5 @—	10 @—

## HONEY.

Although advices from some of the prominent honey producing sections of the State are to the effect that there is a large crop, receipts and offerings in this center continue of very moderate proportions. Market is tolerably firm at quotations, but business is mostly of a small jobbing character.

Extracted, White Liquid.....	6 @ 6¼
Extracted, Light Amber.....	5 @ 5¼
Extracted, Amber.....	4 @ 4¼
White Comb, 1 lb frames.....	12 @ 13
Amber Comb.....	9 @ 11
Dark Comb.....	6 @ 8

## BEESWAX.

Spot supplies are of light volume. Such transfers as are being effected are at generally unchanged values.

Good to choice, light, ½ lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Market for Beef has ruled quiet but steady, the demand being about up to the average for this time of year. Mutton brought in most instances full current figures, market being moderately firm at the quotations. Neither Veal nor Lamb was in excessive receipt, although quotable values for both remained as last noted. In sympathy with conditions East, tendency on Hogs was to slightly easier figures than lately current, but there was no decline.

Beef, first quality, dressed, net ½ lb.....	7 @—
Beef, second quality.....	6¼@ 7
Beef, third quality.....	6 @—
Mutton—ewes, 6¼@7¼c; wethers.....	7 @ 8
Hogs, hard grain fed, medium.....	6¼@ 6½
Hogs, small, fat.....	6¼@ 6½
Hogs, large, hard.....	5½@ 6
Hogs, feeders.....	—@—
Hogs, country dressed.....	7¼@ 7½
Veal, small, ½ lb.....	8 @ 9¼
Veal, large, ½ lb.....	7 @ 8
Lamb, spring, ½ lb.....	8¼@ 9

## POULTRY.

The market as a whole has been most of the time in an unsatisfactory condition for sellers. Arrivals were heavier than warranted by the quite limited demand invariably experienced in the mid-Summer season, with many consumers off in the country, and those remaining running largely on the lighter diet of fruits and vegetables. Eastern poultry comprised a large portion of the receipts. Large young chickens and big fat Hens were the only kinds especially sought after.

Turkeys, live hens, ½ lb.....	9 @ 10
Turkeys, live gobblers, ½ lb.....	9 @ 10
Hens, California, ½ dozen.....	3 00 @ 4 50
Roosters, old.....	3 00 @ 3 50
Roosters, young (full-grown).....	6 00 @ 7 00



Fryers.....	3 50	@ 4 00
Broilers, large.....	3 00	@ 3 50
Broilers, small.....	2 00	@ 2 50
Ducks, old, per dozen.....	2 50	@ 3 00
Ducks, young, per dozen.....	3 50	@ 4 00
Geese, per pair.....	1 00	@ 1 25
Goslings, per pair.....	1 12 1/2	@ 1 25
Pigeons, old, per dozen.....	1 50	@ 1 75
Pigeons, young.....	1 50	@ 1 75

## BUTTER.

While receipts are on the decrease, as is to be expected in July, there is still enough coming forward to enable buyers to operate to about as good advantage as for some time past. Dealers do not find it necessary, however, to place as much butter in cold storage as they have been doing lately, and to this extent the market shows improvement. An advance in prices for strictly choice to select will likely be experienced in the near future.

Creamery, extras, per lb.....	18	@ 18 1/2
Creamery, firsts.....	17	@ 17 1/2
Creamery, seconds.....	—	@ —
Dairy, select.....	17	@ 17 1/2
Dairy, firsts.....	16 1/2	@ 17
Dairy, seconds.....	14	@ 15
Dairy, soft and weedy.....	—	@ —
Mixed store.....	12 1/2	@ 13 1/2
Creamery in tubs.....	17	@ 19
Pickled Roll.....	—	@ —
Firkin, California, choice to select.....	16	@ 17
Firkin, common to fair.....	14	@ 15

## CHEESE.

There is a fair demand for domestic product, both regular flats and Young Americas, as also all other small sizes, and current values are being well maintained.

California, fancy flat, new.....	8	@ 8 1/2
California, good to choice.....	7 1/2	@ 8
California, fair to good.....	7 1/4	@ 7 1/2
California Cheddar.....	—	@ —
California, "Young Americas".....	9	@ 9 1/2

## EGGS.

There has been no material change in the condition of the egg market since last review. Free arrivals of Eastern, in connection with moderate receipts of domestic, have given a greater supply than immediate custom could be found for. Considerable quantities have lately gone into cold storage from necessity rather than from choice. The quantity of eggs stored, both here and East, was never so heavy as this season.

California, select, large, white and fresh.....	16 1/2	@ 17
California, select, irregular color & size.....	15	@ 16
California, good to choice store.....	12 1/2	@ 14
Eastern, good to choice.....	14	@ 16

## VEGETABLES.

Onions have been in less excessive receipt than for several weeks preceding, and market has shown a generally better tone, especially for desirable Red. Arrivals of Tomatoes have been somewhat irregular, and in consequence there has been considerable fluctuation in prices for this vegetable. Green Corn of desirable quality was in very moderate supply. Cucumbers were not in excessive receipt. Summer squash was plentiful and cheap.

Asparagus, per box.....	—	@ —
Beans, String, per lb.....	3 1/2	@ 5
Beans, Wax, per lb.....	3 1/2	@ 5
Cabbage, choice garden, per 100 lbs.....	50	@ 60
Cauliflower, per dozen.....	50	@ —
Corn, Green, per sack.....	50	@ 1 00
Corn, Green, Alameda, per large crate.....	25	@ 1 50
Cucumbers, per small box.....	35	@ 60
Cucumbers, Bay, per large box.....	1 00	@ 1 50
Egg Plant, per lb.....	6	@ 8
Garlic, per lb.....	3	@ 3 1/2
Onions, Yellow Danver, per cental.....	75	@ 90
Onions, New Cal. Red, per cental.....	50	@ 60
Peas, Sweet garden, per lb.....	2	@ 2 1/2
Peas, good to choice, per sack.....	65	@ 1 00
Peppers, Green Chile, per lb.....	10	@ 12 1/2
Peppers, Bell, per lb.....	8	@ 10
Rhubarb, per box.....	—	@ —
Rhubarb, Mammoth, per box.....	—	@ —
Squash Summer, per small box.....	25	@ 40
Summer Squash, Bay, per large box.....	40	@ 75
Tomatoes, River, per large box.....	2 00	@ 2 50
Tomatoes, per small box.....	85	@ 1 25

## POTATOES.

Many of the potatoes arriving this week showed serious damage from the recent hot weather, and for stock of this description the market was unfavorable to sellers. For most desirable qualities, however, the market was firm, prices showing a rather wide range. Old potatoes are nearly out of stock. In a small way, mainly for seed, choice old are bringing \$1.75@2.

Burbanks, Petaluma-Tomales, per ctl.....	—	@ —
Burbanks, Oregon, per cental.....	—	@ —
River Burbanks, in boxes, per cental.....	90	@ 1 75
Early Rose, per cental.....	1 00	@ 1 30
Mission Garnet Chile, in sacks.....	1 15	@ 1 40

## The Fruit Market.

## FRESH FRUITS.

There were heavy receipts of Apples, Peaches, early Pears and Plums, largely of common qualities, a very considerable proportion of the offerings being in baskets from Sacramento river district. For all common stock and for fruit which was either too green or too ripe to be desirable, the market was weak, there being

entirely too much of this low grade or off qualities of fruit. Choice to select in free boxes, especially such as was desirable for shipment, brought fairly good prices, in some instances above quotable rates. Bartlett Pears arrived sparingly and choice shipping stock met with prompt custom. Nectarines were in fair receipt, but it was the exception where the quality was choice, most of the offerings being under ripe, and averaging too small in size to be suitable for the best trade. Figs made a liberal display and were materially lower. Cantaloupes were in fair receipt and prices tended downward. Watermelons were too scarce to quote, but not many could have been placed to advantage during the past few days, the weather being too cool. Currants were in light supply and market was firm for choice. Berries of nearly all varieties in season showed decreased receipt, and tendency of the market for best qualities was to better figures than had been ruling.

Apples, Red Astrachan, per 50-lb. box.....	40	@ 1 00
Apples, green, per small box.....	15	@ 30
Apricots, Royal, per box.....	20	@ 40
Apricots, fair to choice, per ton.....	15 00	@ 25 00
Blackberries, per chest.....	3 00	@ 4 50
Cherries, Black, per box.....	40	@ 85
Cherries, Royal Anne, per box.....	50	@ 85
Cherries, Royal Anne, per lb.....	5	@ 8
Cherries, Black, per lb.....	5	@ 8
Currants, per chest.....	3 00	@ 5 00
Figs, 1-layer box, 25@35; 2-layer.....	40	@ 65
Gooseberries, common, per lb.....	—	@ —
Grapes, Arizona, Seedless, per crate.....	1 50	@ 1 75
Logan Berries, in baskets, per chest.....	4 00	@ 5 00
Nutmeg Melons, Arizona, per crate.....	2 00	@ 3 00
Peaches, per box.....	20	@ 40
Pears, Dearborn Seedling, per small box.....	35	@ 50
Pears, River Bartletts, per 40-lb. box.....	1 00	@ 1 35
Plums, per box.....	20	@ 40
Raspberries, per chest.....	5 00	@ 6 00
Strawberries, Longworth, per chest.....	4 00	@ 7 00
Strawberries, Large, per chest.....	4 00	@ 5 00
Watermelons, Arizona, per doz.....	—	@ —

## DRIED FRUITS.

The prominent feature of the market for cured and evaporated fruits is the demand for new Apricots, there being a very fair inquiry, both for shipment and on local account. The quality of this fruit this season promises to be of high average. More than the usual proportion of the crop will likely be dried, owing to the English duty on the sugar used in the canned fruit operating against the canned product. Prices for dried Apricots show a rather wide range, with a decided difference in the views of dealers and growers. It looks, however, as though there would be a demand at fairly profitable figures for the entire season's output of this fruit. Buyers talk 6 1/2@7 1/2c. for fair to choice Royals in sacks, delivered at common shipping points, but there are very few being secured at this range. Sales of choice new Apricots in carload lots have been made at 8 1/2@8 3/4c., and there are some growers and dryers contending for an advance on these figures. No other new dried fruit has yet been received. The output of Peaches promises to be liberal, but the same cannot be said of Pears. Choice evaporated of the latter give promise of bringing good prices. In last season's dried fruit there is very little doing. Sales effected are at much the same figures lately current, stocks being principally Prunes, Peaches coming second on the list.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6 1/2	@ 6 3/4
Apricots, Royal, choice, in sacks, per lb.....	7 1/2	@ 8
Apricots, Moorpark.....	9	@ 11
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/2	@ —
Apples, 50-lb boxes, rings, pressed, good to choice.....	3 1/2	@ 4 1/2
Figs, White, fancy pressed.....	—	@ —
Nectarines, per lb.....	4	@ 6
Peaches, unpeeled, fancy.....	5 1/2	@ 5 3/4
Peaches, unpeeled, choice.....	3 1/2	@ 4
Peaches, peeled, in boxes.....	11	@ 13
Pears, unpeeled Bartletts, halved, fancy.....	5 1/2	@ 6 1/2
Pears, halved, unpeeled Bartletts.....	3 1/2	@ 4 1/2
Pears, quartered, unpeeled Bartletts.....	3 1/2	@ 4 1/2
Plums, Black, pitted.....	3 1/2	@ 4 1/2
Plums, White and Red.....	4 1/2	@ 5 1/2
Prunes, Silver.....	4 1/2	@ 6

## COMMON SUN-DRIED.

Apricots.....	5 1/2	@ 6 1/2
Apples, sliced.....	2	@ 2 1/2
Apples, quartered.....	2	@ 3
Figs, Black.....	—	@ —
Figs, White.....	—	@ —
Peaches, unpeeled.....	2	@ 3
Pears, prime halves.....	2 1/2	@ 3 1/2

Prices for 1900 crop Prunes, as named by the California Cured Fruit Association: District No 3, four sizes, 3c. per lb.; 40-50s, 4 1/2c.; 50-60s, 4 1/4c.; 60-70s, 3 3/4c.; 70-80s, 3 1/2c.; 80-90s, 2 3/4c.; 90-100s, 2 1/2c.; 100-120s, 1 3/4c.; 120 up, 1 1/4c. The selling price of Prunes for District No. 1 is 1/2c. per pound less, and for District No. 2 1/4c. per pound less than for District No. 3.

## RAISINS.

The market shows no new developments, being exceedingly quiet locally. News is now awaited of the result of the effort being made East and abroad to dispose of the stock of last year's raisins still remaining in the hands of the Association. The official quotations continue as previously noted.

## F. O. B., CARLOAD LOTS.

Imperial Clusters, 6-crown, per 20-lb box.....	3 00	@ —
Dehesa Clusters, 5-crown.....	2 50	@ —
Fancy Clusters, 4-crown.....	2 00	@ —
London Layers, 3-crown, per box.....	1 60	@ —
do do 2-crown, per box.....	1 50	@ —
(Usual advance for fractions.)		
Loose Muscatel, 4-crown standard, per lb.....	—	@ 7
Loose Muscatel, 3-crown.....	—	@ 6 1/2
Loose Muscatel, 2-crown standard.....	—	@ 6
Loose Muscatel, seedless.....	—	@ 6 1/2
(Above prices for loose raisins are for 50-lb boxes.)		
Seeded Raisins, 1-lb packages, per lb.....	5 1/2	@ —
Loose Muscatel Pacifics, 5 1/2c., 5 1/4c. and 5c. for 4, 3 and 2 crown respectively.		
Thompson Seedless.—Bleached fancy, per lb., —c; choice, 9c; standard, —c; prime, —c. Unbleached 7 1/2@9c.		
Sultanas.—Bleached fancy, per lb., —c; choice, 8 1/2c; standard, —c; prime, —c. Unbleached, 7c.		

## CITRUS FRUITS.

Oranges are now in light supply, but are receiving very little attention, deciduous fruits being at present given the preference. Lemons were in more active demand than for some weeks preceding, but supplies proved more than ample, and prices showed no special improvement. Market for Limes was firmer.

Oranges—Navel, per box.....	75	@ 2 00
Seedlings, per box.....	50	@ 1 25
Valencias, per box.....	1 00	@ 2 50
Grape Fruit, per box.....	75	@ 1 50
Lemons—California, select, per box.....	2 25	@ 2 50
California, good to choice.....	1 75	@ 2 00
California, common to fair.....	1 00	@ 1 50
Limes—Mexican, per box.....	4 50	@ 5 00

## NUTS.

Hardly anything doing in Almonds and not many offering. Walnuts are out of stock and not quotable. Business in Peanuts is not brisk, but previous values continue in force.

California Almonds, shelled.....	18	@ 22
California Almonds, paper shell, per lb.....	12	@ 14
California Almonds, soft shell.....	10	@ 12
California Almonds, hard shell.....	6	@ 7
Peanuts, California, fair to prime.....	4 1/2	@ 5 1/2
Peanuts, Eastern, hand-picked.....	5 1/2	@ 6
Pine Nuts.....	5	@ 6

## WINE.

So far as wholesale business is concerned, or transfers of wines from producers, there is nothing to report, owing to absence of offerings, and this must continue to be the case until new crop comes upon the market. Values for round lots of dry wines of last year's vintage remain nominally 22@25c per gallon, with market decidedly firm in tone. While the grape yield this year will be light, advices from some northern vineyards are to the effect that the first crop will be of low average, but that the second crop gives promise of turning out better than was generally anticipated a few months ago.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.		Since July 1, 1900.	Same time last year.
Flour, 1/2 sacks.....	83,114	6,506,831	6,503,484
Wheat, centals.....	256,007	8,804,507	7,149,240
Barley, centals.....	150,360	3,904,401	5,227,285
Oats, centals.....	16,130	633,485	809,119
Corn, centals.....	2,740	124,605	160,501
Rye, centals.....	—	188,229	103,727
Beans, sacks.....	1,939	547,879	368,070
Potatoes, sacks.....	18,918	1,539,695	1,258,822
Onions, sacks.....	2,137	119,832	175,074
Hay, tons.....	2,851	164,234	158,327
Wool, bales.....	2,688	58,555	60,866
Hops, bales.....	—	9,493	10,646

## EXPORTS BY SEA.

FOR THE WEEK.		Since July 1, 1900.	Same time last year.
Flour, 1/2 sacks.....	53,932	4,022,824	4,319,054
Wheat, centals.....	164,582	8,000,872	6,442,078
Barley, centals.....	105,701	2,122,216	3,970,032
Oats, centals.....	1	49,817	47,891
Corn, centals.....	—	3,538	23,613
Beans, sacks.....	163	14,236	27,616
Hay, bales.....	4,299	91,555	143,155
Wool, pounds.....	—	1,362,175	4,754,123
Hops, pounds.....	785	574,131	1,103,502
Honey, cases.....	4	2,217	3,583
Potatoes, pack's.....	2,437	135,433	76,844

## California Dried Fruit at New York.

NEW YORK, July 2.—Evaporated apples, common, 5 1/2@4c; prime wire tray, 5 1/2@5 1/2c; choice, 6@6 1/2c; fancy, 6 1/2@7c. California Dried Fruits.—Business is light, with market easy in tone, but no special changes in values. Prunes, 2 1/2@6 1/4c. Apricots, Royal, 8@12 1/2c; Moorpark, 9 1/2@14c. Peaches, unpeeled, 7@10c; peeled, 12@18c.

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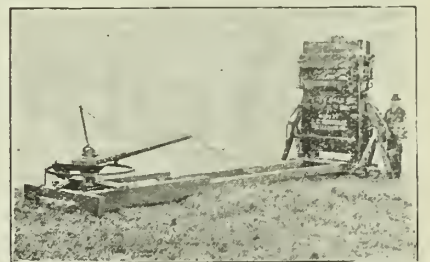
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## THE SUGAR BEET.

### An Important Improvement at a California Sugarie.

The following account of the osmose process and plant by which Superintendent J. McCoy Williams expects to increase the net output of the Oxnard factory, in Ventura county, was furnished by H. Mendelson, chief chemist, to the Oxnard Courier:

**UTILIZATION OF WASTE PRODUCTS.**—One of the problems confronting the American beet sugar industry is the utilization of the waste products—the pulp, the refuse lime and the molasses. Pulp and lime are willingly used in countries with more intense farming than here, as food for stock or fertilizer. The refuse lime in Chino and Oxnard is returned in rotary lime kilns, an invention of James G. Oxnard and William Bauer. Thus it is used over again.

**MOLASSES.**—The molasses, however, in all the American factories, except Oxnard, Chino and Norfolk, has been without any utilization, consequently left the factory in the waste water sewer. Molasses in a technical sense is 50% sugar solution containing impurities of such quality as to prevent any crystallization of sugar. In Germany it is now mostly used for feeding stock. Ready made mixtures of molasses and cotton seed meal or similar foodstuffs always enjoy a good market. As the molasses contains nearly all the mineral salts taken by the beet out of the soil its ash is a good fertilizer. In fact the factory in Salinas has burned the molasses and used the residue for this purpose.

However, the sugar in the molasses is not utilized by all those means with such profit as can be done if sugar is manufactured therefrom and sold as granulated. This end has been heretofore accomplished in the above named factories by a chemical process known as the "Steffen's process." Its principle is the precipitation of the sugar out of a thinned molasses solution at low temperatures by burned lime in form of an insoluble compound containing only lime; and molasses for some reason not used in the factory last year was fed to cattle by the Donlon Bros. with extremely good results.

**THE SUGAR.**—All the impurities remain in solution and are filtered off in filter presses. The lime-sugar compound, whose scientific name is saccharate of lime, after being removed is mixed with water to a saccharate milk which is added to the raw beet juices. Its action is purifying as pure lime. The lime is afterwards precipitated by carbonic acid gas as insoluble carbonate of lime, the chemical compound of which the lime rock consists before it is burned. The sugar goes into solution and is subjected to the same process as the beet juice and of course is later on gained in form of granulated. Thus theoretically all the sugar in the beet is obtained (of course excluding the sugar lost by unavoidable causes) in form of granulated while the impurities leave the factory in the waste water. However, this process is very expensive, considering, besides other things, the immense amount of lime necessary, together with the apparatus, to produce it and the ice machine to maintain the low temperature at which the reaction between lime and sugar takes place.

If one keeps in mind that molasses contains 50% sugar and only 30% impurities, it stands to reason that it ought to be cheaper to remove 30% from the 50% than vice versa. Now a great part of those 30% impurities consist of crystallizable alkali salts especially in countries with alkaline soil. All these salts like crystallizable bodies have the following property: If a solution of them be inclosed in a bladder or parchment paper and the bladder dipped in water, the salts will go through the bladder or the parchment paper into the surrounding water until the percentage of the inside and outside of the bladder is the same. As stated above every crystallizable matter has this property, consequently sugar also. But the rapidity with which these matters permeate the parchment is different. Bodies of simple chemical composition like salts, osmose (the scientific expression for this power) quicker, while bodies of complicated chemical composition, like sugar osmose slower. Consequently if we fill our bladder or parchment paper with the mixture of salts and sugar called molasses and dip it in the water, after a certain time a great many salts and little sugar will osmose into the surrounding water, while inside of the bladder remains a solution containing much sugar and very little salts. This osmosed molasses is of course much purer than the original molasses and if it is boiled down it crystallizes and after being worked in the centrifugals like others sugar juices the original not crystallizable molasses is divided into three parts: (1) the thin osmosed water containing much salt and little sugar; (2) crystallized sugar, (3) a final non-crystallizable molasses.

**THE APPARATUS.**—The arrangements to operate this process on a large scale are the following: A series of wooden frames are covered with sheets of parchment paper; alternating with those are straight frames. Holes in these frames are arranged to take molasses flows in one frame and water in one on each side of it. All frames filled with molasses are connected with each other and so are the frames containing the water. The whole arrangement is

screwed together and looks like a filter press. The molasses enters continuously on one side going through molasses frame until it leaves on the other side osmosed and purified. The water enters on this and after going through each water frame leaves the apparatus saturated with salts and little sugar.

After the water and molasses inlet has been once arranged properly it hardly needs to be changed. In Oxnard about eighty of these apparatuses are to be installed by means of which about 160 tons of molasses per day can be handled. Thus Oxnard will have the largest osmose plant in the world as it also has the largest Steffen's plant. The osmose water containing little sugar will not be wasted, but will be used to dissolve the final molasses derived from osmosed molasses, the solution to be treated by the Steffen's process. The osmose process is not a new one, but has been essentially improved in the United States by H. Vallez, superintendent of the Lehi sugar factory, Utah, and former chemist in Norfolk, Nebraska.

The combination of the Steffen's and osmose process is new. A fact to rejoice over is that every apparatus pertaining to the process has been made on the Pacific coast.

It is the intention to handle molasses from the Spreckels factory at Salinas and the Clark factory Los Alamitos as well as the home product, which will greatly increase the net sugar output of the Oxnard factory.

## THE STOCK YARD.

### Hereford Sales.

TO THE EDITOR:—There have been more Hereford cattle bought and sold during the first five months of 1901 than ever before within a like period during the history of the breed. This may be no surprise, perhaps, to those who have kept in close touch with Hereford matters, but the number and size of these transactions is doubtless a matter of wonder to many. During the above period 9338 applications for transfer have been received at this office—but 4700 less than were received during the entire year of 1900. Of this number by far the larger portion is made up of small sales—from a single animal to a carload—and about 1200 were transferred at auction sales. The result of this brisk traffic in Herefords is that the majority of the breeders have been drawn upon for their entire surplus, some of them reporting that they have nothing left for sale over ten months of age.

One of the gratifying features is the number of animals purchased by the range States. Wyoming, New Mexico, Colorado, Utah, Texas, Indian Territory, Montana, Oklahoma, Idaho, Nevada and Arizona purchased 2737 registered Herefords during this five months, or practically 30% of the entire number of cattle sold. Texas alone has purchased almost 1000 head from other States within this period. It is no wonder that a recent writer classes Herefords as one of the principal products of Texas.

The profitability of an industry depends upon the sale of the product, and the Hereford breeder certainly has no reason for complaint. Prices have been no lower than last year in spite of the increased number to be sold, and the ease with which a single animal or an entire load can be disposed of is an advantage that is not enjoyed to a like extent by the breeders of any other kind of pure bred stock. Herefords are moving in the right direction and the future is particularly bright for the breeders.

Kansas City, Mo. C. R. THOMAS, Secretary.

### Loco Poisoning.

TO THE EDITOR:—Mr. D. R. Brown of Corona recently sent to Prof. Hilgard for analysis two specimens of loco weeds from San Bernardino county. One, marked No. 1, is an early one and grows on dry soil. One, marked No. 2, is not fully matured, and grows on sub-moist or salt grassland. Some farmers claim that both are dangerous to horses. The one marked No. 2 grows in Mr. Brown's pasture and he has had eight or ten horses go locoed (crazy) within the last eight years.

The specimens sent by Mr. Brown are:

No. 1: *Astragalus crotolariae*. No. 2: *Astragalus* sp. (too immature for more definite determination).

I am interested in hearing that the above-named plant is another of the "loco weeds," as it does not appear to have been previously reported as injurious to stock.

The subject of loco poisoning has recently been investigated by the U. S. Department of Agriculture, Washington, D. C., and the following notes are from a lengthy publication of the Department dealing with the general subject of plants poisonous to stock.

Loco poisoning usually affects particularly the brain and eyes of animals. It has been found that the eating of loco weeds by stock is an acquired habit which spreads rapidly among other animals when once started; the habit seems to be acquired by imitation.

The loco disease may assume either an active or chronic form; in the active form the animal lives but a few days, while in the chronic form it may live for

two or more years and manifest the same symptoms in a milder degree.

Locoed horses are used to best advantage—when not badly diseased—as draft animals; but they must be maintained in good condition and prevented from eating loco weeds. Locoed horses may work or travel in a perfectly natural manner for days at a time. They frequently, however, run away or are attacked with fits without any apparent external cause. Although an apparent recovery may be brought about in locoed sheep and horses, such animals when allowed to run upon the range again almost invariably return to their old habit of eating loco weeds. Animals which have once been locoed are, therefore, not to be considered suitable for stocking the range, for the reason that the majority of them will become locoed again, and for the additional reason that other animals will learn the habit, and the loco disease will thus spread among the stock.

In the case of horses which are kept away from the weed for a considerable length of time, the value of the animal is a very uncertain quantity. Such horses may return to the habit of eating loco weeds at the first opportunity, and, even if prevented for a time, they may develop vicious habits, as already stated. A small percentage of locoed horses apparently make a complete recovery and develop into valuable and reliable animals.

J. BURTT DAVIE,

Assistant Botanist University of California.

A fuller account of these loco weeds, reproduced from the excellent publication of Mr. V. K. Chestnut, to which Mr. Davie refers, was given in the PACIFIC RURAL PRESS of April 13, 1901.

### The Holstein-Friesians.

At the sixteenth annual meeting of the Holstein-Friesian Association of America two Californians, C. D. Pierce of Stockton and J. C. Cochran of Arcata, were elected to membership. The address of the retiring president in the matter of official tests pointed out the great increase in the number of cows tested, from 30 in 1895 to 250 in 1900; as well as the record breaking character of each succeeding year's tests. Since the last annual meeting every seven-day official record has been broken. The yearling record is now placed at 16 lbs. 3.4 oz. of butter in seven days. A heifer two years old has placed the mark at 18 lbs. 10.1 oz., while three of her companions in the same herd have made records of 18 lbs. 1.4 oz., 17 lbs. 13 oz. and 17 lbs. 4.9 oz. respectively. The three-year-old record has increased from 24.48 lbs. to 26 lbs. 4 oz. in seven days; the four-year-old record has jumped to over 100 lbs. of milk in a day and 28 lbs. 3.8 oz. butter in a week; the mature cow record, which has for some years been 26½ lbs., is now increased to 27 lbs. 14 oz. It is worthy of repetition here that these records are all official, made by disinterested persons from agricultural colleges or experiment stations, which puts their accuracy and reliability beyond question.

The report of the Superintendent of Advanced Registry, S. Hoxie, Yorkville, N. Y., showed a total of 361 entries, the largest number since the inauguration of the official tests. Thirty-two of these entries were of bulls. There were 299 of cows with seven-day butter records made under the supervision of agricultural experiment stations, including twenty-five net profit records. There were thirty unofficial records of cows entered. A striking feature shown by the details of the report was the increase of the world's highest weekly butter record by nearly two pounds.

The report of the secretary, F. L. Houghton of Putney, Vt., showed the largest growth of membership ever made in the history of the association. One hundred and twelve new members were added to the roll. Nearly 10,000 certificates of registry were issued, a large increase over last year, and double that of three years ago. Volume XVII of the Herd Book has been issued, and Volume XIX, including Volume XI of the Advanced Register, will be ready for distribution in midsummer.

CALIFORNIA is ready to buy a quarter of a million dollars worth of redwood lands for a State park in the district known as the Big Basin in Santa Cruz and San Mateo counties, an appropriation of \$250,000 having been made for that purpose by the last Legislature. At a meeting held in this city on Tuesday, Governor Gage presiding, a resolution was adopted declaring the commission ready to receive proposals for the sale of lands, and it was also proposed that only such tracts of lands as are contiguous to each other be bought. The commission will visit the basin in July or August.

EXPORTS from the United States in the fiscal year 1901 now about to end will probably reach \$1,500,000,000, the highest point ever recorded for a single year in the history of our export trade. For the eleven months ending with May, 1901, the total exports were \$1,385,013,595, being double those of the corresponding period of 1889, and \$100,000,000 in excess of the total for the eleven months of last year, which broke all previous records.



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## THE VINEYARD.

### Appalling Loss of Vines in Santa Clara Valley.

From some cause, a cause as yet not clearly determined, says the San Jose Mercury, the grape vines of Santa Clara county are dying by the wholesale. Some of the vineyardists in speaking of the trouble refer to it as a mysterious disease, and say that it is worse by a great deal than the phylloxera. "For," as one said, "not a vine is left and the destruction is complete and immediate."

The first signs that were clearly visible of this approaching disaster to the grape growers was manifest last year and some of the more observant vineyardists detected some trouble as early as the fall of 1899. Destruction grew rapidly, and last year—1900—quite a number of vines died. Generally speaking the vineyardists came to the conclusion that the cause was the dread phylloxera, but this theory has received a shock since some vines on resistant roots are now dying. Close investigation has also shown that it is not the phylloxera that is killing the vines. When vines die from this disease they die from the root up. The present trouble does not begin at the lower part of the vine or root, but at the top. The first thing noticeable is the withering of the leaves and young shoots at the top of the main vine trunk. This creeps down at a rapid rate and in a few weeks, at most, the entire vine is dead, absolutely gone.

**FIRST APPEARANCE.**—This trouble first appeared on the west side of the valley. It was noticed with alarm last year, yet little was said about it, as all hoped that it would not be so general as to materially affect the production of grapes in the county. But it is now clear that it is widespread, and so widespread that the greater portion of the vines of the valley are absolutely destroyed.

**WIDESPREAD DESTRUCTION.**—Paul Masson, who is a large grower as well as dealer in wines, said: "Trouble, disease, do you ask me? Why, the vines of this valley are gone. Why, the disease, or whatever it may be, covers the whole valley. No vineyardist has escaped. The vines on the east side are not destroyed, and the growers in the foothills on the east side will have something of a crop, but the vines are not in the best condition. Still they may escape destruction. But in the great grape producing section of the valley, the west side, all the way from Mountain View to the end of the vineyards on the south, one may say that the vines are gone. The vines which were sick last year, but escaped death, are dead this year."

F. Brassy, another large grower and wine man, said: "Nothing to equal the present destruction of the vines has ever been known in this county. The phylloxera was bad and is still bad, but the present trouble catches vines on resistant roots just as bad as any other. Growers are greatly disheartened, for thousands of dollars in valuation is being swept away and vines are dying by wholesale over the entire valley. The only bright spot in the entire county is on the east side, on the eastern foothills. I have heard of no serious loss there."

**THE CAUSE.**—"The cause is a disputed question. Many of the vineyardists think it is a new disease, and as

yet a mysterious one, that has struck the vines. They are generally at sea. For myself, I believe that we are needlessly alarmed, for I do not think the cause is a disease but the result of three years in succession of excessively dry weather. The grape vine goes down deep for moisture. One dry year has little effect, for the lower moisture is reached. But when we had three years of short rainfall, the water sank to such a low level that it was below the reach even of the tap root of strong grape vines. Last year the lack of moisture began to show and some vines withered and died. Others suffered seriously but lived through the winter. This year they are dead. While we had abundant rains last winter, the damage to vines had already been done. The moisture which goes down 4 or 5 feet is not the moisture that vines draw their supply from, that is old vines. They go far lower than that. Young vines—those two or three years old that continued to grow last year—are all right this year.

"Of course, this is but a theory, but I feel quite sure that it is correct. The only thing that disturbs the theory is the fact that some vines, not 10 feet away from others, are alive and fairly vigorous while the others are dead. I cannot understand or explain that if my theory is correct. The vines are of the same age and presumably the roots go to the same depth for moisture. But this condition is the exception and not the rule, for as a rule all the vines are dead or dying in a vineyard where the trouble exists."

**GREAT LOSS.**—Some idea of the loss can be had from the statement of a large grower on the west side. He asked that his name be withheld but said: "Four or five years ago I sold 240 tons of grapes off of one vineyard of forty acres I own. Last year I got but twenty-five tons off that same vineyard. This was not due to frost but due to the lack of vitality of the vines. Many died and those which lived through the season and bloomed this year are now dying. Frost may have cut some figure in destroying the grapes but it would not kill the vine stem. This year I will get no grapes to speak of, for my vines are dead. I am willing to sell all that the forty acres will produce at a ten-ton basis."

Paul Masson was unwilling to say what he thought was the cause but it seemed from his remarks that he ascribed the trouble to the cause given by Mr. Brassy. He said that some of the vines were undoubtedly suffering from phylloxera but that this was not the cause of the wholesale destruction. "I do not believe," said he, "that this is a new disease. I think there are other causes. I have planted many vines the past season and I shall plant many more next. If I thought this destruction of vines was due to some mysterious disease I would not put out more vines."



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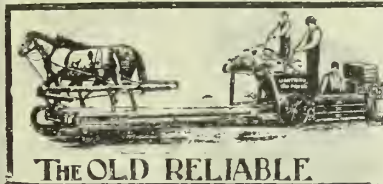
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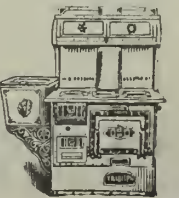
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TO THE EDITOR:—Some one has estimated that forty million dollars' damage is done every year in the United States by insects alone. I think this alone should prompt the orchardist to become acquainted with his insect foes and to fight them in an economical, effective way.

Teachers in our country schools can not be too well informed in what is termed "Nature Study."

The Grange should take up this subject. We read that our vines are dying from phylloxera, and a disease which works from the top down. Fungus has attacked fruit trees. I have seen scores of trees killed by what looks like dry rot. Trees are troubled with dieback. The Hessian fly is destroying grain. We read of a parasite and remedies are given to prevent the ravages of the fly.

We need more careful farming. Better varieties of wheat can be sown. The soil can be fertilized. We learn of a new variety of grass that does well in southern California.

Farmers need to read more about their own business, to meet together so that the summary of human experience can become a common possession from which each can select that which fits his needs and thus advance the agricultural world.

I ask for experiences in mutual fire insurance and also in mutual life insurance. I know that some insurance companies are working on wrong principles and will fail when new members cease to come in fast enough.

Let us have the very best you can give us. If you would improve yourselves, remember that "reading maketh a full man, writing an accurate man, and speaking a ready man."

It is the duty of the Master of each Grange to devise work. Be up and doing!

There is great need to destroy the thistles and noxious weeds by the wayside and in the fields, and also to see that the minds are not left uncultivated. "If neglect is allowed, the weed crop, both material and moral, will battle and torment you."

G. W. WORTHEN.

**The Fourth and Children's Day.**

TO THE EDITOR:—Stockton Grange celebrated its annual festival in commemoration of our nation's grand holiday—the Fourth of July—in conjunction with Children's Day. The children were out in their gala day dresses, and their bright young faces, as they responded when called to render their part in the programme with song, instrumental music or recitation, brought recollections of childhood days to the older members present, and the spirit being contagious, they, too, rendered their part, to the enjoyment and pleasure of the audience.

Mrs. A. Ashley, one of our oldest and most valuable members, with a great deal of time and patience formulated a sketch of the history of our country, for the benefit of the children, and it was thoroughly enjoyed by all present.

The programme was quite long. Afterwards we all proceeded to the dining hall and were regaled with ice cream and cake, which were particularly refreshing as the afternoon was very warm.

N. H. ROOF, Sec'y.

Stockton, June 29.

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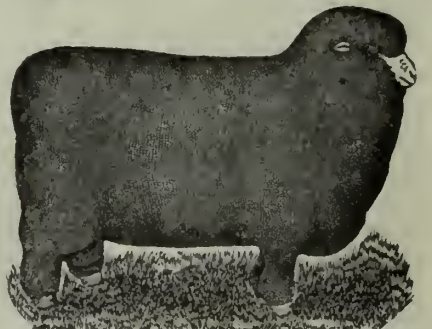
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## Will Breed Zebra Mules.

W. C. Myer of Ashland, Or., a well-known stockman and Shetland pony fancier, proposes to experiment with an interesting hybrid to learn its possibilities and utility, says an exchange. The ambitious scheme is nothing less than to breed a hybrid which shall be a cross between a zebra and a horse.

From the Department of Agriculture at Washington Mr. Myers has learned that such experiments in the United States have been of very limited character. He was referred to Prof. J. Cosar Ewart of the Edinburg University, who owns the only male Burchall zebra in Europe which has been successfully mated with mares.

Prof. Ewart says that in his native state the zebra will never be tamed, as out of 1000 not more than two or three can be broken to ride or drive, but that the hybrid zebra is more docile and more serviceable than the ordinary mule. Following is the description of a couple of colts: "Both are of the usual striped coloring, handsome and smart, showing more of the horse side of the family than some and possessing the clean, hard-wearing legs common to this cross, and promising a happy immunity from unsoundness. The feet, as those who have seen the animals are aware, are much more like those of the ordinary mule, but hard and black. In harness they trotted smartly, with long, low action, with little bend in knee or hock. When in regular work they were fairly fast and their movement should make them pleasant, easy mounts."

An account of zebra-horse crosses, with engravings of the new styles of mules, was given in the PACIFIC RURAL PRESS of Dec. 9, 1899.

## Bees Make a Coffin.

Over the Santa Ynez mountains, at the Kelly brothers' bee ranch, says the Nordhoff Ojai, there are men who by reading and work with the bees are possessed of much useful and some ornamental knowledge of the honey makers. They know them from morning till night; but they do not know all that happens in the bee-hives at night.

Cleanliness is a characteristic of bees and it is known that they will remove from their presence any objectionable objects. And they will do more. When there is an object that is too great to be removed, and the bees, for reasons of their own, do not care to move out and abandon their home, they will find other means of making an uncleanly thing's presence not offensive to their sensitive selves.

A few days ago a strange object was found in one of the Kelly hives. It appeared to be a great piece of wax, but why the bees should have spent so much energy in making the wax when there was honey to gather was a mystery, until the object was removed from the hive and on investigation was found to be a dead rat encased in a coat of wax. The rat, straying into the hive, was stung to death, but the bees were unable to move the body. To make its presence less offensive, the little workers spent the night in building about the rat a coffin of wax, coating it from head to tail. It is said to be one of the most rare cases of bee instinct on record.

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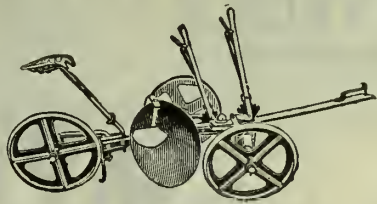
The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

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## Rotary Disc Plows.



All the plow manufacturers have been making experiments of this style of plow, and this is evidence that they see sufficient merit in the principle of the disc plow to try to determine if they can make the plow so that it will do good work under all conditions. The Benicia Agricultural Works of Benicia, Cal., evidently have struck upon the right model, for they have placed orders to put up over 1000 of these plows for next season. From all accounts, it will be a surprise to other disc plow manufacturers, and many applications for agencies are already being made to the selling agents, Baker & Hamilton, San Francisco, Sacramento, Los Angeles.

## New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR WEEK ENDING JUNE 18, 1901.

- 676,651.—CURTAIN SUPPORT—J. N. Anderson, Mono Lake, Cal.
- 676,834.—NON-REFILLABLE PACKAGE—L. Blatz, La Mirada, Cal.
- 676,456.—VOTE RECORDER—A. J. Boling, S. F.
- 676,427.—CONCENTRATOR—W. G. Dodd, S. F.
- 676,603.—LID FOR COOKING UTENSILS—A. H. Drake, Union, Or.
- 676,534.—CONCENTRATOR—T. Dynan, Amador, Cal.
- 676,715.—BOTTLE—F. Franz, S. F.
- 676,554.—FISHING ROD TIP—W. Friedlander, Portland, Or.
- 676,608.—STEAMING FRUIT, ETC.—W. E. Hale, Alameda, Cal.
- 676,748.—FURNITURE DRAWER—R. G. Hargrave, Colfax, Wash.
- 676,504.—STRAW STACKER—M. B. Kassel, Pomeroy, Wash.
- 676,437.—PRINTING PRESS—Knoch & Vogel, Los Angeles, Cal.
- 676,542.—PUMP—S. W. Luitweller, Los Angeles, Cal.
- 676,566.—FURNACE—A. Magnuson, Emeryville, Cal.
- 676,544.—BED—F. Martin, S. F.
- 676,470.—GUITAR—W. W. Oakes, Seattle, Wash.
- 676,704.—PROTECTING PILES—S. L. Shuffleton, Seattle, Wash.
- 676,518.—OIL BURNER—A. C. Steuart, Santa Paula, Cal.
- 676,856.—WHEEL HUB—E. H. Wagener, Modesto, Cal.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

APPARATUS FOR STEAMING AND SPICING DRIED FRUIT.—No. 676,608. June 18, 1901. C. E. Hale, Alameda, Cal., assigned to the J. K. Armsby Co., of Chicago, Ills. This invention relates to an apparatus which is designed for steaming or spicing dried fruits of any description which are capable of such treatment. It comprises a containing chamber for the fruit, a perforated pipe extending into the chamber, a hood within the chamber having its upper portion enclosing the pipe, said hood being perforated to permit the vapor delivered from the pipe to be discharged into the mass of fruit which covers and surrounds the hood. In conjunction with this is a chamber adapted to contain flavoring material, and means for directing the vapor through the flavoring material before it reaches the fruit containing chamber.

WHEEL HUB AND BOX THEREFOR.—No. 676,856. June 18, 1901. Mrs. S. J. Willson, Administratrix of E. H. Wagener, Modesto, Cal. This invention relates to improvements in wheel hubs and boxes therefor, and is especially adapted for sulky or gang plows which are mounted upon wheels. It consists of an independent journal box fitting the hub of the wheel and turnable therein, and means for removably locking the box within the hub. Dust caps or sleeves are fitted to chambers in the ends of the box, and means for holding the wheel in place so that the dust caps are held stationary while the wheel and journal-box are turnable.

CAN COOLING MACHINE.—No. 676,070. June 11, 1901. Erik Manula, Astoria, Or. This invention relates to improvements in machines for cooling cans after they have come from the soldering machine. It consists essentially of a revolvable reservoir having an annular cooling platform or table upon which the cans are delivered automatically in upright position, guides by which the cans are moved outwardly on this table in the course of the revolution of the latter, and means for delivering water to and from the reservoir.

## Steel Farm Wagon Wheels.

The patent grooved tire wheels made only by the Havana Metal Wheel Co. of Havana, Ill., have, after being tested for four years, proved to be the most reliable wheels made by any concern in the United States. The groove in the rim of the wheel is a feature not found in any other make of wheels and one that adds three to five times to the durability of the wheel, as the heads of the spokes are down in the groove and are so protected that they cannot wear off. When the heads of the spokes wear off the wheel is gone, as the spokes simply pull out of the tire. These wheels are made any size to fit any size skids. This concern also makes ten kinds of low down truck wagons. Write them for prices.

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We attend to all business connected with patents, such as the preparation of Caveats, Trade-Marks, Design Patents, Assignments, Licenses and Agreements. We make examinations as to the patentability of inventions, searches, and give opinions as to infringements, or the scope or validity of Patents. Our Branch Offices and arrangements for Foreign Patents, Trade-Marks, etc., are very extensive and complete. Inventors' Guide sent free on application.

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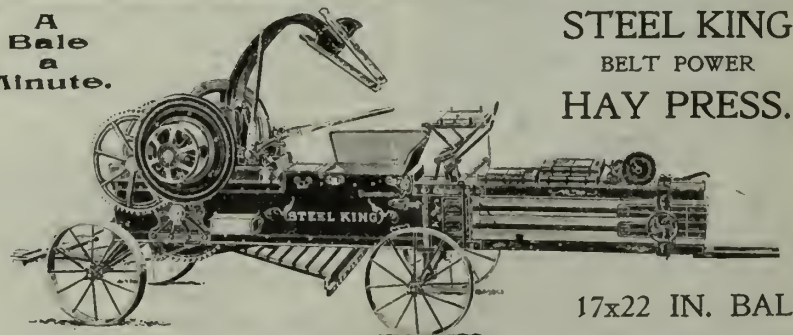
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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 2.

SAN FRANCISCO, SATURDAY, JULY 13, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

## The Passing of Joseph Le Conte.

We doubt if the going hence of any other Californian would call for such breadth and depth of mourning as that which follows the departure of Dr. Joseph Le Conte of the University of California. His name is familiar wherever learning finds devotees. His works have commanded respect and admiration everywhere. His charming personality of mind and heart has endeared him to all. While still in full possession of his great powers and fame his end came during a visit to the Yosemite valley last week. From amid the majestic mountains he knew and loved so well his spirit took its flight to the Creator's throne.

We are pleased to give our readers a glimpse of his beloved face and to pay our tribute of respect to his memory in words fitly chosen by two men able and fit to speak them:

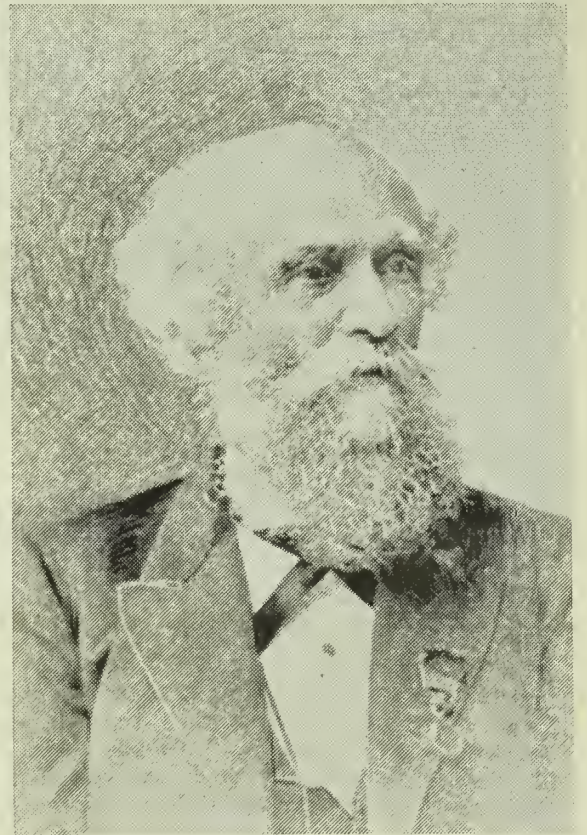
"In the immediate presence of our great loss, it is Joseph Le Conte as the man, even more than Joseph Le Conte as the scholar, who is in our thought. To those who have known him, who have felt the touch of his rare personality, I must believe it will always remain so. His soul was clear as a crystal. His graciousness of manner was only the reflection of his inner life, which was grace and human kindness personified. A kindly human interest threw its robe over all the framework of his scientific life, and made him, with all his attainments and all his knowledge, a vital, living, loving, helpful human force. He dealt with the world of nature, but its lessons for the life of man, for the cleansing and uplifting of personal and social life, were of immediate importance to his thought. Many among the hundreds who have sat in his lecture room may forget what he taught, none

will forget what he was. Even through the pages of his books shone out the warmth of his personality, for there was heart and the fire of life interest in every paragraph he wrote.

"For thirty-two years he has been a great vital power in the University of California. No man can estimate the value of the influence he has exerted. He has been always and everywhere for good and for every good thing. He has believed in the good and has looked for the good, and everywhere good has sprung up by his pathway to meet him. He wasted none of his time and strength in the depreciation of his fellow men. His students knew what he expected of them, and they answered to his faith.

"The habit of his thought was large and catholic. He saw clearly, because he saw in good perspective. He took many things into consideration when he framed a judgment, more things than it is given to men to see and know. It was because of this catholic range of his vision that he could not be narrow, and it was because his human sympathy reached to so many human lives that he could not be uncharitable. We shall not see his like again, but the memory of his life and his life relieved in those he has taught and touched will remain a unifying vital force in the institution to which he gave his best, and a blessing to the world."—BENJAMIN IDE WHEELER.

"The death of Dr. Joseph Le Conte removes one of the foremost thinkers and scientific men of the time—one whose writings and modes of thought have influenced the progress of science all over the civilized world. Educated originally for the medical career, he thus acquired the foundations of the broad knowledge which later made him equally at home in the purely physical sciences and in the biological field. While his geological work is, perhaps, best known to the general American public, through the wide use made of his excellent books on that subject in universities, as well as in the secondary



The Late Joseph Le Conte.

schools, his early and warm advocacy of the doctrine of evolution has probably served most to make him known and appreciated in the Old World, where he was always warmly welcomed and honored in scientific assemblies by the foremost men.

"It was he who first made the University of California known to the outside world as a school and center of science on the western border of the continent, and who kept it in view of the world of science, almost alone, for many years. His connection with it was largely instrumental in attracting to it other men, who otherwise would have hesitated to remove to what was then the outskirts of civilization from their Eastern homes; and his ceaseless scientific activity acted as a stimulus both to his colleagues and to the students under his instruction, whose affection and esteem remained with him through life.

"It is not easy to overestimate the influence he has exerted in rectifying the popular idea that the doctrine of evolution necessarily tends to materialism, if not atheism. So far from this, he regarded it as inculcating the highest ideal of a world plan, and he stanchly maintained not only its compatibility with religious belief, but that it offered a much higher point of view than could be derived from any of the orthodox doctrines by elevating nature into the realm of teleologic thought and aspiration. This part of his influence will, perhaps, be most missed in the present state of scientific thought. His death brings heavy loss not only to the University, but to the world of thought at large."—E. W. HILGARD.

## A Great Exposition at Charleston.

On December 1 of this year there will open at Charleston a grand industrial display called the South Carolina Interstate and West Indian Exposition, of which we give views of two buildings herewith. It will continue six months, covering the winter months and thus entering the field which California pioneered a few years ago. The two buildings shown are in our special line, but there are others of equal dignity devoted to other industrial activities, and a very commendable effort is being made by the management, supported by the liberality of the State, to make the Charleston event in every way creditable to the new life of the old South, and to express the progressive spirit of the adjacent islands of the West Indies. It is a splendid undertaking and we trust it will be notably successful.



The Cotton Palace and the Palace of Agriculture at the Charleston Exposition.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, July 13, 1901.

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## The Week.

The week of patriotic meditation and thunderation is succeeded by a period of exceptional activity. The gathering of the midseason fruits has begun and the canneries are open, and the labor being released from the grain fields is finding a place in the handling of fruits on their way from the trees to the markets. Seasonable summer weather prevails, and though the days begin to show shortening they are still long enough in hours and effective sunshine to please the most industrious.

Eastern fruit shipments are now running behind last year's figures. Last week 246 cars were reported against 425 the same week last year. The total for the season to date last year was 1612—nearly 300 cars more than this year. The Eastern hot spell has worked against our fruit shippers, and there is complaint that the schedule time to Chicago is not being reached by roads east of Ogden. A few carloads of deciduous fruits, mostly pears, are going direct to London.

Though five cargoes have gone out for Europe and a lot by steamer for Peru, spot wheat is rather weak and a shade lower than last week. In futures, too, there is little doing and options are lower. The situation is not helped by the advance in bags which comes with a heavy demand for the moment. Prison bags are disposed of for the season, and importers have it their own way and count on its being too late to start more from Calcutta for this harvest. Barley is weak but unchanged, with buyers not active. If there were more ships available they would probably gain courage. Corn is scarce and high, while rye is exactly the opposite, and large offering is made. New red oats are steadier, but blacks are slower, and light colored oats are not yet in. Few beans are offering here, though advance sales in Limas are reported from below. Bran and middlings are scarce and high, as mills are not running. Wheat and alfalfa hay are selling fairly and the market is in better tone than for some time back. Beef is quiet and steady. Mutton is moderately active and hogs are still high. Dairy hogs are mostly cleared up and grain hogs are just beginning to arrive. Eastern hogs are now too high to come this way. The best butter is higher and so is cheese. Eggs have advanced except common grades which are unchanged. There is a good market for choice chickens; Eastern are still arriving, but the quantity is less and the demand good. It looks as though the city markets for various delicacies would be much improved during the visit of Eastern organizations this month. Receipts of potatoes are less and the

market is firm at higher rates. Onions are unchanged and steady. There are lighter receipts of deciduous fruits and the quality is better, placing the market in better shape. Canners are buying apricots freely, though claiming that rates reported from the outside are too high for them. The English duty on the sugar in canned apricots is not proving as good a bugbear as was hoped. Oranges are unchanged and slow while lemons are moderately firm, because limes are so high. Dried apricots are selling fairly and the quality is very good—a fact which will favor the higher prices which ought to be soon reached. Hops and honey have no new features. Free wools are well cleaned up here and buyers are shy of other kinds. Prices for northern wools in the country are higher than city rates at present.

The shortage in grain sacks, to which allusion has been made, covers the coast. The crop reports promise an unusual amount of wheat in Washington, Oregon and Idaho, and the bags in sight are few. It is said that the Washington penitentiary can furnish 1,300,000 bags, while not less than 5,000,000 bags will be required to handle the grain crop of Walla Walla valley alone. The State is selling its grain sacks at \$5.90 per hundred, while dealers are asking 8½ cents each. A stampede of Walla Walla farmers is in progress to secure their entire supply from the penitentiary. California prison bags are also scant of the demand. The dealers seem to have the advantage—how great can be better known when the bags en route from Calcutta come in and when the excessive estimates of this year's crop are shorn down to the facts. It is very easy to overestimate the California grain crop this year, and we believe many people are doing it.

The Sacramento river fruit growers are getting warmed up over the hardships visited upon their product en route and after arrival in this city. They organized at Courtland last week to secure better accommodations from the combination of San Francisco commission men and less delay in transporting fruit and produce. Ninety per cent of the growers of the lower river valley were represented. A committee was appointed to draft articles of incorporation and a code of by-laws, to report at a meeting to be held the last Saturday of this month. We do not know just what specific troubles there are now but there are always sure to be some when the growers of a region like the Sacramento river are content to let their traffic drift with the tide for lack of neighborly co-operation. We are glad that they have decided to know each other better and act together.

It has transpired that certain dairy goods exported from San Francisco to the Orient are not at all true to the labels, and neither in quantity nor quality are they what they purport to be. This is sure to ruin any advances we may make in the development of trade in that direction, and those interested in honest products should appeal at once to Secretary Wilson to enforce here a regulation in the Appropriation Act for the current fiscal year, which authorizes the Secretary of Agriculture, in his discretion, to apply the law for the inspection and branding of live cattle and products of the dairy intended for exportation, the purpose being to enable our exporters of dairy products to give foreign buyers the assurance of certification by the Government of the United States for the purity, quality and grade of our dairy exports. It is announced from Washington that Secretary Wilson has decided to exercise the authority conferred on him by establishing in the customs districts of Boston, New York, Chicago and San Francisco a system of inspection of dairy products, but first will have experts in those districts gather all possible data in order that efficient regulations may be drafted for the conduct of this new service. A beginning will be made in a tentative way with the purpose in view to bring about a practical and honest system by which all parties may be properly protected. It is stated at the Washington department to be "probable that at an early date the owners or shippers of products for export may, upon application, have the same marked and certified as to purity and quality, provided they are above minimum grade, yet to be fixed." Our dairy producers should appeal to Secretary Wilson to take steps at once to make his plans operative at this port.

## QUERIES AND REPLIES.

### Blister-Mite, Scab and Blight of the Pear.

TO THE EDITOR:—I send some leaves and branches of my pear trees, which seem to be stricken with some disease. What is the trouble and what the cure?—GROWER, Tehama county.

It is a sad lot of specimens and shows your trees to be affected by three different plagues. First, the irregular-shaped spots on the leaves, dark brown or black, in which the spot seems to be blistered, or raised a little above the other leaf surface, are caused by the blister-mite (phytopus), which is becoming very abundant in the Sacramento valley, and perhaps elsewhere as well, though our samples chiefly come from that direction. At these spots and between the upper and lower surfaces of the leaf there are colonies of mites, too small to be seen at all with ordinary magnifiers, but in each spot may be usually found the orifice through which these mites pass. They are very destructive to foliage, and, therefore, seriously injurious to the tree. As they are protected by their manner of burrowing, they cannot be reached by sprays during the summer; but, before the leaves fall, the hibernating individuals betake themselves to the bark, and a good winter treatment of lime, salt and sulphur or winter strength of kerosene emulsion will keep them in check.

The second serious thing your samples show is the genuine pear blight, which is now causing so much trouble in Kings and Fresno counties. This is a bacterial disease, extending in the sap of the trees, and is beyond reach of sprays, either in winter or summer. It can only be restrained by cutting out the affected parts, and this is not usually a cure, but merely a check upon its speed, rendering the trees that much longer-lived and profitable. It does, however, advance with great rapidity sometimes. Full suggestions of how to watch for the appearance of the disease and how to cut to best advantage were given in the PACIFIC RURAL PRESS of April 6th ult.

The third trouble of which your specimens give intimation is the "pear scab"—the work of a fungus (*Fusicladium dentriticum*), which causes a smoky appearance on the leaves early in the season, and afterwards turns part of them black, producing, however, a different appearance from the blackening of the blight. It attacks, also, some twigs, blackening and roughening parts of them, but not killing them back, as the blight does. It also appears on the fruit, making roundish spots, sometimes quite large, in which there is a blackened center, often surrounded by a whitish or transparent ring made of the remains of the disrupted epidermis. The black spot checks the growth beneath it, and the progress of the unaffected parts renders the fruit misshapen. The black spot also cracks crosswise and sometimes decay enters the exposed flesh, or the surfaces dry without decay. This disease injures the tree and renders the fruit worthless. It can be checked by lime, sulphur and salt wash in the winter or by the winter strength of the Bordeaux mixture, because its spores pass the winter on the bark. Its first appearance on the leaves should, however, be looked for constantly early in the season, and a second stroke be made at it by using Bordeaux mixture with the Paris green in the first spraying for the codlin moth.

### Small Scale Frost Prevention.

TO THE EDITOR:—Will a peach blossom if enclosed after it opens well in a paper bag for fifteen or twenty days, develop a fruit? Our peaches are killed by frost three years out of four. It has occurred to me that if the fruiting twigs are enclosed in paper tubes tied at both ends, each tube enclosing two peaches, it would pay according to what I calculate as the cost of the tubes and their handling and the market value of peaches here.—READER, New Mexico.

If the peach blossom is allowed to open well so as to have the advantage of pollination, either by its own or pollen from another blossom, and is then enclosed in a paper bag, the fruit will set and proceed towards perfection without any difficulty. This has been demonstrated by the experiments in cross-pollination, which show that the paper covering is no hinderance to the progress of the fruit. Whether this paper covering would be protection against frost depends upon how low the temperature drops, or upon how long the low temperature prevails.



Sufficient exposure will cause the air in the bag to become the same temperature as that surrounding it, and frost injury can be done as effectually as though the small fruit was not covered. For "ordinary frosts" probably the protection would be adequate. It seems likely, however, that the covering of the tree by a framework with adjustable slat trays to be placed over the tree during the dangerous period, and to be removed afterwards, would be a more practicable proposition. This arrangement is being used with orange trees at Riverside by one grower who has over ten acres covered, and he claims that the returns are profitable, although the investment is very great. In this case the tree has the advantage of heat from the ground, because its radiation into space is prevented by the covering. In the case of the fruit covered in the bag there would be no such conservation of heat, and it would only be a question of how rapidly the enclosed air would sink to the temperature of the surrounding atmosphere. A better proposition even than roofing the trees over would be to train the peach trees against the south side of walls or high board fences, with a little covering to be run out above on a bracket during the frosty period. This is the way fruits are grown in considerable quantities in Europe, where they have freezing temperatures to contend with after the fruit blossoms.

Pear Blight, Bees and Alkali.

TO THE EDITOR:—Pear blight now largely prevails in our Bartlett orchards, which three years ago seemed to be perfectly healthy and even last year bore heavily. The soil has considerable alkali and plenty of moisture. It is said that the bees carry the infection, but how did the blight get into the orchard in the first place? Will you throw some light on these subjects?—READER, Fresno county.

Unfortunately, the experience which you describe in the loss of trees has been shared by many others in your region, and the blight is also appearing in other parts of the State. We suppose you understand the character of the organism by which this blight is caused, so we will not undertake discussion of that subject. Full statements made by scientific investigators as to the occurrence of the trouble were published in the PACIFIC RURAL PRESS of August 25, 1900, and May 25, 1901. The relation of bees to the distribution of the germs of this disease seems to be well established by the investigators. They have made sufficient experiments to satisfy them that the bees do actually carry the germ, as shown in our issue of May 25th ult. You are probably aware that there is now a direct issue on that point between fruit growers and bee keepers of the Hanford district, and that they propose to have a re-examination made of that matter, and the bee keepers seem to agree that if the germs are actually found in the nectar, or in the bees, they will remove their bees out of the region during the blooming period. It is impossible to anticipate what the result may be from the examination which they propose to make. It must be said, however, that the detection of the germ of pear blight is an exceedingly delicate and difficult line of investigation, and can only be conducted by thorough experts in bacteriological phenomena. It will require inoculation experiments as well as microscopic investigation. How the blight actually gains access to an orchard which has hitherto been healthy is usually a matter of conjecture. It could be carried in many ways. For example, it could readily be carried on pruning shears, and men who go from place to place, pruning, could carry it long distances without knowing it. If the bee is the guilty party she could carry it for several miles, as we believe it is determined that bees make exceedingly long flights. The relation of alkali to the spread of pear blight is a very new subject, and one on which there is no satisfactory information. The only effect that alkali could have would be in weakening the trees and thus predisposing them to blight. But there is nothing whatever in the alkali which could account for the occurrence in the first place. It is perfectly well demonstrated now that all these diseases of plants and animals which are due to organic germs are dependent upon the presence of those germs, although we cannot begin to tell in many specific instances in what way the germs were introduced. Demonstration has gone so far as to show that if there are no germs there is no disease of that character. Alkali would unquestionably cause

die-back of the tree, which might in some respects resemble pear blight, but we infer that you are too well informed on the peculiar appearance of the disease to mistake it for injury to the roots caused by the alkali.

Aphis and Thrips on Watermelons.

TO THE EDITOR:—I send you two watermelon vines affected with insects. How long will they affect the vines and is there a cure? I have tried sulphur without much effect. Plants are suffering all through this region.—SUBSCRIBER, Lodi.

Two young vines are sent. The large vine is very badly beset with thrips; the vine in the small box has melon aphis. Fortunately, both these insects are reached by the same treatment. The vine must be thoroughly sprayed either with whale oil soap (one pound to four gallons of water) or with kerosene emulsion, of which we give the formula, in case readers may not have it at hand. It should be kept handy, as we are constantly referring to it:

Take kerosene, two gallons; common soap, or whale oil soap, one-half pound; water, one gallon. Dissolve the soap in the water and add it boiling hot to the kerosene. Churn the mixture by means of a force pump and spray nozzle for five or ten minutes. The emulsion, if perfect, forms a cream which thickens on cooling. Dilute, before using, one part of the emulsion with nine parts of cold water. To obtain this emulsion in proper form violent agitation is necessary, the time required depending on the violence of the agitation and temperature of the mixture. Prof. Cook's formula is this: "Dissolve in two quarts of water one-fourth pound of hard soap by heating to the boiling point, then add one pint of kerosene oil and stir violently from three to five minutes." This is best done by use of the force pump. This mixes the oil permanently, so that it will never separate. Add seven pints of water and the wash is ready for use.

Use a good spray pump with a cyclone nozzle, because this can be put well under the vines and turned over them also in spraying, so that all parts of the foliage and stems can be reached. This treatment should be repeated in a couple of weeks, because some of the individuals are likely to escape the application, or to be developed later on from eggs which are not injured by spraying. We are glad to assure you that there is no invasion by these insects which can not be overcome by prompt and vigorous treatment. There is not so much reason to hope that the insects will disappear; they are likely to remain until they destroy the plants. There may be, of course, some circumstances which would check their progress, but it is not safe to expect it.

Applying Nitrate of Soda.

TO THE EDITOR:—I have thought of applying two or three pounds of nitrate of soda to each of my fruit trees by placing it in two furrows, one on each side of the tree, after irrigation, and cultivating it in. Would such concentration in spots injure the roots, or is the excess of nitrate to be feared because of the quantity the tree receives without regard to the particular part of the root system which happens to serve in taking it in?—ORANGE GROWER, Ventura county.

The danger in nitrate of soda lies chiefly in excessive application directly to the roots of the tree. Two or three pounds would not be too much if well distributed. It is the concentration and not the fact that the tree is oversupplied which causes direct injury, although excessive application, even if well distributed, would stimulate too great wood growth in the tree, and probably produce large, puffy fruit. An application in furrows on each side of the tree, followed by cultivation, ought to sufficiently distribute it. An ideal method would be to dissolve it in the water and have it then sink to the depth the water goes, but this may be impracticable. It would do to apply it in the furrow before irrigation, if the furrows are nearly level, so that the water sinks vertically. Of course, in case of rapidly flowing water most of the nitrate would be carried to the lower end. One has to do the best one can according to the conditions he works under, the end in view being to distribute widely and to prevent concentration in spots.

Summer Spray for Woolly Aphis.

TO THE EDITOR:—What spray can I use now on apple trees set with fruit, for woolly aphis? I cannot get ladybugs. I sprayed last year with salt, sulphur and lime.—A. A. M., Watsonville.

Kerosene emulsion, carefully prepared, so that free oil does not occur, is the best we know of. It is the most penetrating wash and that is needed with this insect.

The Cracking Climax.

TO THE EDITOR:—Our first crop of Climax plums from buds and grafts on different stocks came in with about 75% cracked, so as to be worthless as a shipping plum. Can you inform me if that is characteristic of this variety, or is it from local causes?—SUBSCRIBER, Ione.

We do not know how far this trouble extends, but it is widely complained of in the foothill district. It looks like a bad habit of the variety. We would like to know how far it extends. Who gets good Climaxes?

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending July 8, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

The weather was slightly cooler during the first of the week, but high temperatures again prevailed toward the close. Conditions have been favorable for grain harvesting, haying and fruit picking, and the hot weather has been very beneficial to corn and vegetables. Fires have caused some damage to fields in Colusa county. Large crops of grain and hay are being harvested, and both are reported of excellent quality. Feed is dry, but still good, and cattle are in fine condition. Hops are making good growth. Fruit picking, drying and canning are progressing rapidly. The peach crop will be light. Grapes, olives and oranges are in good condition.

COAST AND BAY SECTIONS.

Favorable weather conditions have prevailed during the week, and all crops have matured rapidly. In some sections the yield of grain and hay is the heaviest for several years. In San Benito county wheat and barley are reported far above the average in yield and quality. Hay is yielding a much better crop than expected in Humboldt county, and quality is good. Hops and sugar beets are making vigorous growth, and give promise of heavy crops. Grapes are doing well, but it is expected the yield will be comparatively light in many sections. Apricots and prunes are below average in most places, though the fruit is generally of excellent quality. Peaches will also be light in some sections. Apples will probably yield a good crop. Citrus fruits are in good condition.

SAN JOAQUIN VALLEY.

The weather was clear and seasonable during the past week. Grain harvesting has progressed rapidly, and the yield has been up to expectations and quality generally good. Most of the grain has been stored in the warehouses. Deciduous fruits are ripening rapidly. Canneries and dryers are in full operation. The apricot crop is nearly all gathered. Peaches and plums are being shipped. The quality of all fruit is good. Melons are making fine progress, but are somewhat late. Vines are generally in excellent condition and making fine growth. A large grape crop is anticipated. The third crop of alfalfa is being cut in some localities, and is of good quality. Stock of all kinds are in good condition. Water for irrigation is plentiful. Green feed has dried up.

SOUTHERN CALIFORNIA.

Warm weather has continued in most sections through the week, with light fogs along the coast, and conditions have been generally favorable for all crops. Berries and tomatoes are yielding good crops. Apricots are very light. Late peaches will probably yield a fair crop. Walnuts are looking well and are said to be past danger from blight. Citrus fruits are in excellent condition and a large crop is expected. Beets, beans and corn are looking well. Grain harvest is progressing, with a fair yield in some sections.

LOS ANGELES SUMMARY.—Apricot drying is progressing with weather favorable. Root and vegetable crops look better than for many years. Oranges have set well generally. Oxnard sugar factory starts work this week.

EUREKA SUMMARY.—The soil is dry and vegetation is making slow growth. Comparatively little Humboldt fruit is on market and of poor quality. Apples will probably be 30% below full crop.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, July 10, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date .....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week...	Minimum Temperature for the Week...
Eureka.....	.00	T	T	.03	60	48
Red Bluff.....	.00	.00	.00	T	102	60
Sacramento.....	.00	.00	.00	T	96	48
San Francisco.....	.00	.00	.00	T	74	48
Fresno.....	.00	.00	.00	T	104	50
Independence.....	.00	.00	.00	T	96	54
San Luis Obispo.....	.00	.00	T	T	88	44
Los Angeles.....	.00	.00	.00	T	82	52
San Diego.....	.00	.00	.00	T	72	60
Yuma.....	.00	.00	.00	.07	114	72



## HORTICULTURE.

### Lemon Pruning.

By GEORGE T. STONEHOUSE, at the Pasadena Farmers' Club.

In addressing you on the lemon, I must say that my experience is only from my own ranch. Having there over 1000 lemon trees, I had to use considerable experimenting with my trees to find out what was needed to produce a crop. In the first place, I found the tree needed more water for irrigating it than the orange to produce a fair amount of fruit, and still the lemon will stand a longer time and more heat without wilting of its leaves with less irrigation than the orange.

**EXPERIENCE.**—When I bought my ranch two years ago, the lemon trees had all been cut back to save expense of fumigation for red scale; so, being new at the business, I hired a supposed expert at fruit ranching. So we plowed, cultivated and irrigated in their regular order, and my 1000 lemon, also orange, apricot and other trees, seemed to grow very well. I said to the hired man that the trees were doing immense. He said yes, they were. I said no more about them, and he did not, but went on with the cultivating and irrigating; the lemon trees went on growing until they got from 4 and 5 feet to 15 feet high, and no lemons, except on top of the long poles. I let this man go and got another man who knew everything about ranching; he cut the top off of all the trees, and still no lemons grew on them; but umbrellas grew all over the tops and made the trees as dark as night on the inside.

**A NEEDED CHANGE.**—I thought something had to be done to produce some lemons, as I had got only four boxes of lemons off the whole 1000 trees; so I sent this man away and took charge of the ranch myself. I found out that a lemon tree had to be pruned out, so that the sun would enter, to grow any fruit. So I thinned them out and cut out all suckers. I am now working them over the open-center system as fast as I can get the time. In cutting out on the open-center system the sun will shine down, and the space made will fill up with new small wood that will bear the best fruit. I have now a good crop to pick off each month.

**How to Do It.**—In pruning out cut all those branches that grow straight up. If you have one that grows straight up and it would leave a hole in the tree if cut out, then bend it down and tie it to the trunk with a soft, small rope until set, thereby causing the sap to flow more slowly, which will be a great benefit to the fruit spurs which will start out from the upper side of the branch, and fill up space made by bending branch down; then clip out or pinch off all that grow straight up and the most vigorous of the others; let the balance grow until you can decide which should remain permanent. You should not let the tree grow any higher than you can make a high reach to pick your lemons, as the labor of going up and down a ladder to pick the fruit is more than the value of the fruit, besides making a greater expense when you want to fumigate; cut out all those branches that cross and rub against each other.

When cutting back the branches cut at the fork when possible, being careful to cut so as to leave the part of the branch that grows outward, except it be the weaker part; then better to cut off at fork or tie down the better part until set. Often two, three or more shoots will start where the branch was pruned the previous time; always cut away the larger of them, as they only make wood growth, while the smaller of them bears the fruit. The proper pruning time, I think, is January, February and March, as they are partly dormant at this time of year. Branches should not be crowded so that light and air cannot have free circulation; limbs of a weak or slim character should never be let grow longer than to be strong enough to carry the fruit it will have to bear.

**THE MARKET.**—One great trouble lemon growers have to contend with is to find a paying market for lemons outside of the summer season. Some means should be invented to carry over lemons grown in the winter—which is our best fruit for use the next summer. While I was visiting in Corona, four years ago, I met a fruit farmer there who told me he preserved lemons from the fall till the next summer. He was on the foothills, and in one of his hills was a formation of white sand. He dug out a room in the white sand and placed some boxes of lemons in it, and they came out the next summer in a perfect condition. If something of this character could be gotten up by our fruit exchanges, what a boon it would be to our lemon growers. Our exchanges should open among all, or a portion of them, a citric acid factory to use the culls, as I believe the only cause of the failure of citric acid factories has been to get enough culls to keep the factories running. If the exchanges should send all the culls to one or two factories, then they could get quantity enough, and, I think, be a success.

It is thought by some that the lemon tree can be made to bear a larger amount and a better grade of fruit in the summer by picking off the bulk of its fruit in the fall and early winter, as at this time of

year the market price is very small, and the loss of revenue would not be felt, as the better price for the summer lemons would more than make up the difference.

Lemons should always be picked before irrigation, so that the balance left on tree will get all the benefit from the late irrigation; never pick for three or four days after a hard rain, as the lemons will not keep so well and are apt to spot or discolor in holding them in picking boxes.

It is, I believe, an unsettled question whether unsalable lemons can be used as a fertilizer. It is my belief that, there being so much acid in them, they will sour the soil and should be carted away.

When picking lemons, handle them carefully and never throw them in the picking boxes; pick every four to six weeks, to save oversize fruit, as the regular size always finds the most ready market.

### Hints on Summer Treatment of Trees.

Harvey C. Stiles, horticultural manager of the colonies at Corning, gives the Era the following views on summer treatment of deciduous trees:

Pruning of the young twigs along the bases of lower limbs and down the trunks is especially bad, for besides the injury named, there is the still greater damage of exposing the most vital portions of the tree to the fierce rays of the sun and drying effects of hot winds at the very hottest time of the year, and at a time when the tree needs all its best energies to mature its fruit.

Again, these very twigs are capable of being made the most valuable fruit wood of the tree, besides protecting from sunburn, consequent borer attacks, etc.; for this lower wood, if untouched till winter and then cut back properly, will produce the finest and most abundant fruit. Being low down, it is not wind-whipped, and the cost of picking it is not one-half of that picked from a ladder. Again, its weight is placed so low down that the tree is not in as great danger of breaking under its load of fruit as is the tree which is trimmed up from the ground, with the fruit buds all chased out and up as far as possible. Any fruit tree in this condition must be headed down—some of them very severely—but not till winter, though some clipping back of young growth on top of the tree to promote the growth of laterals and formation of fruit buds low down may be safely and advantageously done now and later.

The apricot may be summer-pruned to advantage the middle of July by cutting back the season's growth in tops of trees about one-third or one-half. This develops the lower fruit buds and tends to greater productiveness. When thorough summer pruning of the apricot is done, it is practical and oftentimes extremely profitable to delay the regular winter pruning till it shall be shown to what extent spring frosts may have thinned the fruit buds. Sometimes there are none too many left, and then no more pruning is needed. Observance of this plan often makes the difference between a fair and profitable crop and a very light and scattering one.

Take no lower growth from any fruit trees now unless it comes from below where the tree is budded. Even in this case it is safer to shorten these back and leave them to shade the trunk. Where a tree gets sunburn, borers surely follow, and the combination is certain death. If these lower shoots get unduly long, they may also be shortened.

Especially should no suckers be removed from the stumps of top-grafted trees. Leave all these to take the surplus sap which, if unduly forced into the grafts alone, will cause soft, unhealthy growth, and sour sap will be sure to follow. Nip back graft shoots if they get top heavy, but not the suckers, unless the grafts should make only a feeble growth, in which case the suckers should be cut back a little.

### American Pomological Society.

The details of the meeting of the American Pomological Society, which will be held in Buffalo, September 12 and 13, 1901, are rapidly being perfected and will soon be announced. The programme contains the names of a number of the most prominent horticulturists of the United States and Canada, and is particularly rich in topics of practical importance to fruit growers. Among the subjects already arranged for are the following:

"A Comparison of Eastern and Pacific Coast Fruit Culture," by Prof. L. H. Bailey, Ithaca, N. Y.

"Orchard Renovation," by J. H. Hale, South Glastonbury, Conn.; to be discussed by R. S. Eaton, Wolfville, Nova Scotia; W. T. Macoun, Ottawa, Canada, and others.

"Quality and the Market," by C. W. Garfield, Grand Rapids, Mich.; to be discussed by S. D. Willard, Geneva, N. Y.; L. A. Goodman, Kansas City, Mo., and others.

"Development and Needs of the Export Trade in North American Fruits," by L. Woolverton, Grimsby, Ontario; to be discussed by Prof. Geo. T. Powell, Briarcliff Manor, N. Y.; H. M. Dunlap, Savoy, Ill.; Henry E. Dosch, Hillsdale, Or., and others.

"Fermentation of Fruit Juices by Control Methods," by Prof. Wm. B. Alwood, Blacksburg, Va.

"Some Experiments in Orchard Treatment and

the Results," by Prof. F. M. Webster, Wooster, Ohio.

"The Mango—Its Propagation and Culture," by Prof. E. Gale, Mangonia, Fla.

"Loquat Culture," by C. P. Taft, Orange, Cal.

"The Utilization of Culls in Commercial Orchards," by Judge F. Wellhouse, Fairmount, Kans.

One evening will be devoted to a joint session with the National Bee Keepers' Association, during which the following topics will be discussed:

"Spraying Fruit Trees in Bloom," by Prof. S. A. Beach, Geneva, N. Y.

"Bees as Fertilizers of Flowers," by Prof. James Fletcher, Ottawa, Canada.

The discussion of these topics will be led by Mr. R. M. Kellogg, Three Rivers, Mich.

Other topics will be announced later and a detailed programme mailed to all members of the society and delegates to the meeting, as well as to such persons interested as request it of the secretary.

Delegates have already been appointed by more than twenty State and Provincial horticultural societies, and the indications are very favorable for a large attendance.

The fruit exhibit of the society will be held in the Exposition Horticultural Building, space having been generously granted by the Exposition authorities. Exhibits entered for the Wilder medals of the society will also be eligible to Exposition awards. Those contemplating the exhibition of fruits should make early application for space to the secretary. All persons interested in fruits and fruit culture are welcomed to membership.

Announcement of hotel rates, meeting place and other details will be made at an early day.

The officers of the society are: Chas. L. Watrous, Des Moines, Ia., president; Thos. Meehan, Germantown, Philadelphia, Pa., first vice-president; Wm. A. Taylor, 55 Q St., N. E., Washington, D. C., secretary; L. R. Taft, Agricultural College, Michigan, treasurer; Chas. W. Garfield, Grand Rapids, Mich., chairman executive committee.

## ENTOMOLOGICAL.

### The Codlin Moth and the Warfare Against It.

By HORTICULTURAL COMMISSIONER C. H. RODGERS at the Pajaro Valley Orchardist Association Meeting.

The codlin moth (*Carpocapsa pomonella*) has been a pest probably ever since apples were created, and although Adam registered no "kick," records mention complaint against this insect as far back as 200 years B. C. It was introduced into the United States from Europe soon after the first settlements were founded. In 1874 it appeared in California and was first observed in Pajaro valley about the year 1877. Doubtless it was brought into our valley from San Jose in old fruit boxes by the pioneer fruit packers, Rabasa & Sresovich. This insect is here to stay, and while we cannot hope to exterminate it, there are means by which we may be able to hold it in check. To successfully combat this pest it will require the united action and co-operation of all connected with the fruit industry—the packer as well as the grower. Before we can intelligently proceed to apply the remedy it is necessary that we should know something of the habits of the insect, and it is well to explain these characteristics briefly here.

**LIFE HISTORY IN PAJARO VALLEY.**—From observation it is known that the first moths appear in our locality during the latter part of April, soon after the apple blossoms fall. In a few days the little, white, scale-like eggs, about half the size of a pin-head, are laid singly on the young fruit or on the leaves. The eggs hatch in from seven to ten days, and the young worm proceeds to tunnel toward the center of the fruit, preferably by way of the blossom end. It is claimed that 75% of the first brood make their entrance through this route. Later in the season the newly-hatched worm proceeds to open a tunnel at any convenient part of the apple. It remains in the apple from twenty-five to thirty days before reaching full growth. On leaving the fruit it generally makes its way to the trunk, either by crawling down the limbs or by letting itself down to the ground on a thread which it spins, and then crawls to the trunk. Here it spins its cocoon under the loose bark. While its natural instinct is to seek the trunk of the tree, the worm will often hide and spin its cocoon in any convenient place—such as cracks in buildings, in piles of rubbish and in holes in dry clods. It remains in the cocoon from ten to fourteen days in summer, when it emerges a perfect insect.

It takes from thirty-five to fifty days in spring and summer to complete the life cycle, the variation of time depending upon temperature. The midsummer insects pass through their transformations in the shortest period. The worms are remarkably hardy and tenacious of life. From observations I am led to believe that, once in the cocoon, the worm could be kept several years in cold storage, and, when submitted to the proper temperature, would emerge a perfect insect.

The later worms, those formed as late as October, remain in the cocoon until April, May and even June of the following year. Specimens in hatching boxes



emerged later than June 20 this season. Knowing these facts, it is readily understood that there is a continuous laying of eggs and hatching of worms from the latter part of April until November. The first worms reach their growth and leave the fruit early in June. The codlin moth will attack several kinds of fruit, but its preference is the apple.

**HIBERNATION AND SPRING FLIGHT.**—Comparatively few insects pass the winter on the trees, as several kinds of birds, notably woodpeckers and robins, unceasingly seek after these worms during the winter months. Many hide in buildings and fences adjacent to the orchard most of the time. Most of the worms pass the winter in houses used for storing apples. Millions of codlin moths emerge each spring from the packing houses. In some instances every crack and crevice from floor to gable are so full of cocoons that there is no room for more. While the fruit packers this season took steps to destroy the worm in the boxes, it was impossible to reach the greater amount—those hidden in the crevices of the houses.

These moths, on emerging from the cocoons, escape from the houses through some opening and fly with the prevailing wind until they find a suitable place for depositing their eggs.

This flight may carry them a distance of 10 miles. Doubtless it is mainly due to the prevailing westerly wind that so small a percentage of wormy apples are found west of town.

Atmospheric conditions greatly affect the development of the moths. In the warmer sections near the foothills and in the tributary valleys the percentage of infested apples is always considerable. With a cool, foggy spring and summer, the percentage of loss is light in the valley proper. The reason for the lighter percentage of loss in this case is probably due to three causes: Either through infertility of the eggs, which condition may be due to the failure of the parent moth to 'mate,' on account of being chilled and made stupid by the cold or dampness; on account of the egg not having sufficient warmth to cause it to hatch; or the young worm, on emerging from the egg, is chilled and perishes. The first theory appears most plausible.

**THE INJURY AND ITS REDUCTION.**—To give roughly, yet comprehensively, an idea of the percentage of infestation by worms of the different parts of our apple district, take as a starting place a point 2 miles west of Watsonville. The loss by worms at this place is about 2%. Radiating like a fan from this point north, east and southeast the percentage of infestation will increase in a ratio almost equal to the square of the distance, some orchards in outlying districts running as high as 75%. Doubtless, besides birds, there are insects which aid us in keeping the moth in check; but of this I am not certain. I see no reason why a ladybug and its larvæ, or the larvæ of the lacewing fly, should neglect so tempting a bait as a young apple worm before he enters the apple. It is not out of reason to hope that by the introduction of a sufficient number of these beneficial insects we may yet solve the codlin moth problem. Until we are able to fight this pest with our insect friends, we will have to resort to other means.

**MEASURES AGAINST THE PEST.**—As in all cases, an ounce of prevention is worth a pound of cure. Every apple and storehouse should be made secure against escape of the moth. This can be done without much expense by using battings and wire screening. In this way the moths could be held captive until they die, thus eradicating the greatest source of infestation.

Every worm destroyed at the beginning of the season is worth fifty later.

Scrape the loose bark from the old trees.

Clean up rubbish piles around the orchard.

When the old wooden fence gives out replace it with one of wire.

Many different remedies have been tried, chief of which are: Burning lights in the orchard, trapping with many kinds of inventions, picking off and destroying wormy apples, allowing animals and fowls to run in the orchard, and spraying with preparations which are aimed to kill by contact, or with material which poisons the worm when taken into its system.

Leading authorities all assert that the codlin moth is not attracted by light. The band system, if properly carried out, is better than any of the patent traps yet tried. From 40% to 50% of the worms may be caught by its use. If the band method is adopted the worms must be destroyed every eighth or ninth day, or the band will do more harm than good, as it forms a secure hiding place for the worms.

**THE ARSENICAL TREATMENT.**—The highest recommended remedy is an arsenical poison. This is prepared by combining common white arsenic with some substance which will neutralize the acid or burning effect of the arsenic on foliage. The poison in the form of Paris green is highly recommended, as it is the safest in careless hands. It is claimed that by the use of the arsenic sprays as much as 98% of the fruit may be saved.

In the use of this it is recommended that the first application be made soon after the blossoms fall. Other applications should follow every three or four weeks through the summer. In spraying, keep the liquid thoroughly stirred. Use a fine nozzle and apply in the form of a mist. Cease spraying before the

tree begins to drip. If Paris green is used, the proportions are one pound of Paris green to 200 gallons of water. Make the Paris green into a paste before placing it in the tank. As a precaution against evil effects of any free arsenic which might be present, it is well to slack five pounds of lime and add before filling up the tank. On account of disappointment in the use of Paris green, many orchardists are now using the arsenical preparation known as Kedzie's solution.

**GOOD AND BAD PARIS GREEN.**—So much damage has been wrought and so little good has been accomplished through the use of spurious Paris green in this section that our orchardists have reason to look upon it with suspicion.

It seems strange that in defiance of our laws wholesalers still persist in trying to impose upon us an unsatisfactory article. Samples of Paris green placed on sale in Watsonville have been forwarded to the State University for analysis, and all were condemned except two. These were from the houses of Langley & Michaels and W. P. Fuller & Co.

We can and must have good Paris green. It seems there is just one way to protect ourselves from further imposition, and that is to give the guilty such a blow that they will fear to repeat the offense.

Although confessing to a superabundance of the verdant, our orchardists are no "gold brick" dupes, and the green goods vendor may just as well prepare to pungle up the real "green" or move on. We are advised under certain provocations to proceed against and vigorously belabor his satanic nibs with fire, and as these impostors are "it" we propose to maintain the reputation of the town and administer the prescribed remedy until these law breakers realize, as "others who have gone before," that, though our people are long suffering and slow to anger, Watsonville is a hot place for fakirs.

## CEREAL CROPS.

### American Wheat for Italian Macaroni.

Joseph E. Hayden, U. S. Consul at Castellmare di Stabia, writes:

After efforts covering a period of over two years, I have succeeded in demonstrating the fact that the very finest quality of macaroni can be made of American wheat. This has been declared an impossibility by those engaged in its manufacture here, and there are hundreds of establishments in this district. Up to the present time Russian wheat and wheat from the Orient have been used, together with Italian wheat, for the production of this article of food, the American wheat being considered too soft. Through the co-operation of one of the largest establishments in this district, it has been found that this conclusion was based upon the proverbial conservatism of the people. When it is remembered that macaroni consists of wheat to the extent of 60%, it will be readily seen that here is an opening for American wheat of no inconsiderable importance. It should be understood that while there is a tax on American wheat, there is also a tax on all foreign wheat—7.50 francs (\$1.44) for 100 kilograms (220.46 pounds). It should also be borne in mind that international freights covering transportation of grain from Russia, the Orient and the United States are practically the same.

I enclose extracts from a letter from one of the largest manufacturers in Italy, and also send a sample of crude American wheat, with a sample of the wheat ground, and a sample of macaroni made from same:

I send you herewith the result of my experiments in producing macaroni from American wheat. Up to this time I am sure no Italian manufacturer of macaroni thought it was possible, believing it necessary to use a mixture of either Italian and Russian wheat, or of wheat from the Orient and Tunis. I now put in your possession the accomplished fact, which will serve to open up in Italy a wide market for American wheat. America imports macaroni from Italy, mostly from this district. The wheat used, samples of which are here inclosed, is known as "unfalcated wheat," and was purchased by me in New York City. You will notice the rich, golden color of the macaroni, and, as to its consistency, I would note that it can be cooked in one-half the time consumed in the preparation of the macaroni now in use.

It has been suggested to me that if the United States Government would admit free of duty, or, at least, admit at a lower tax than the present tariff, macaroni made from American wheat, a market for our wheat would be opened in competition with that of Russia and the East. The present tariff on 1000 pounds of macaroni is \$15, or 1½ cents per pound; under the plan proposed, 60% of the said 1000 pounds would enter free, leaving 40% to be taxed at the present rate of 1½ cents per pound, making on the 1000 pounds a tax of \$6, instead of \$15. It should be remembered in this connection that the Italian manufacturer of macaroni, under the scheme proposed, would have to pay freight from the United States to Italy, and also pay freight on the same wheat manufactured into macaroni and transported to the United States.

## FRUIT MARKETING.

### The Foreign Walnut Market.

In answer to inquiries by a California association, Consul R. P. Skinner of Marseilles, France, sends to the State Department a very interesting statement, as follows:

The export of walnuts from Marseilles to the United States is confined almost exclusively to nuts grown in the interior of the country, which seek this port because of its advantages as a shipping center. The trade is entirely in the hands of commission houses, and I ascertain that during recent years their business has been seriously injured by the increasing practice of American importers to deal directly with the grower in the interior, and to assume all the risks of unsatisfactory deliveries. Considerable quantities of shelled levantine nuts, most of which grow in Turkey, are imported into France, and are shipped to the center of the walnut growing country, where they are consumed by the oil crushing trade. In certain portions of the interior of France, walnut oil is preferred for table use, in the first place because it is cheap and in the second place because the consuming public demands it. Many small growers have oil presses and produce a sufficient quantity for their own use, but, as with everything else, the present disposition of those engaged in the trade is to concentrate the manufacture of oil in certain industrial centers, notably, Grenoble, where the business is conducted on a large scale; and as the French walnuts command higher prices than the levantine, it has naturally come about that quantities of Turkish nuts are imported into the Departments where walnuts are grown most largely, for the purpose above described.

The walnuts grown in the vicinity of Marseilles are small in size and inferior in quality. No effort is made to export them.

The value of exportations of nuts from Marseilles to the United States during a series of years is shown below:

Year.	Almonds.	Filberts.	Walnuts, shelled and unshelled.	Pistachios.
1895....	\$137,093	\$3,949	\$124,992	\$576
1896....	148,104	3,153	142,273	2,164
1897....	105,118	2,121	185,428	....
1898....	242,704	12,398	115,608	2,020
1899....	183,103	20,731	119,815	578
1900....	238,178	28,730	139,750	3,126

It is impossible at this time to forecast the probable crop of walnuts in France. The trees are now in flower. It may be said that up to the present time, no injury by frosts, drought, excessive rains or otherwise has been noted, and the conditions are favorable to an average yield. It is expected that a price for the new crop will be established in August, and that shipments will begin in September.

The best walnuts sold here are shipped from the Department of Isere, and are generically known as Grenoble walnuts. Marseilles also receives walnuts known as "Marbots," "Cahors," and "Cornes," these being the three varieties most appreciated. They are generally shipped via Bordeaux.

Grenoble walnuts are not prepared for the market by the sulphur process, because they are fair enough in their natural state. All dealers recognize that the sulphur process affects the quality of the walnut, and it is applied only to the Marbot, Cahors and Cornes walnuts, which are of relatively inferior quality.

Walnuts of last year's crop are selling at this moment at \$12.74 per 220 pounds.

The production of walnuts in California is much discussed here, but my informant says that it has practically not affected the market in this city. The buyers in New York and elsewhere use the threat of large crops in that State as a means of hammering down prices in France. This is not true, however, of almonds. While the Princess almond of France is said to be not equaled by the Californian nut, the Californian quality is here acknowledged to be sufficiently excellent to replace the French article, and Marseilles trade has been very much injured in consequence.

The demand for shelled walnuts in the United States is for the confectionery trade, and for this purpose, walnuts of first-class quality are used and whole half kernels are shipped. The small fragments of kernels resulting from the shelling process are carefully saved in the interior of France and used for the production of oil. Unshelled walnuts are at present selling at 145 francs per 100 kilograms (\$27.98 per 220 pounds), best quality, and the small pieces sell for 80 francs per 100 kilograms (\$15.44 per 220 pounds).

The levantine walnut trade is considered entirely separate from the French walnut business, the only possible connection being when an unscrupulous dealer selects the fairer portion of the kernels from a levantine shipment and mixes them with Grenoble kernels, thereby securing a better average price. This, of course, is simply a commercial fraud.

ROBERT P. SKINNER, Consul-General.  
Marseilles, June 4, 1901.



## FRUIT PRESERVATION.

Notes on the Canning Industry, With Special Reference to the Santa Clara Valley.

A special writer for the San Jose Herald has brought together many interesting facts and opinions which will be eagerly read just at this time by the fruit growers. We select from his writing what seems to us of the widest interest.

**THIS YEAR'S PROSPECT.**—The only branch of the fruit industry where the outlook is promising this year is the field exploited by the cannery. All of the managers of the local canneries report the demand good for all that they can produce. The pack will reach in figures that of 1900, and perhaps that of 1899, which was the largest pack in the history of the State. The carry-over from last year practically amounts to nothing, except in the cherry, which was done purposely by the canners foreseeing that the crop would be light and the price high this year. 'Tis thus that the wise canner protects himself.

All of the canneries in the county have been put in prime condition and several of them have enlarged their capacity for production and storage since last year. The question of help will be less vexatious this year than for the past two years, by reason of the fact that less help will be employed in other fields of the industry and more will be forced to seek employment in the cannery. Estimates made now are that the fruit crop in this county, taking all varieties into account, will be one-half in bulk what it was last year. In the harvesting, therefore, it will require only one-half of the help in the field. For the last two seasons the canneries have not been able in the height of the season to obtain what help was needed to take care of the fruit they had contracted for, and have been subject to loss in consequence.

**APRICOTS.**—The apricot pack this year will be about the same as last year, although the crop is about two-fifths that of last year. The quality is said to be excellent and less difficulty than in other years in securing the sizes desired for canning. The apricot is a fruit that has had a rapidly increased demand in the markets of the world. The canners have had a setback this year in the war tax that has just been levied by England on canned apricots and plums, 7 shillings, or about \$1.75 per hundred pounds irrespective of value. This will compel the apricot to bring a higher price at retail in England than the peach or pear and will consequently decrease the export. Knowing this, however, the canneries are planning to pack about the usual quantity and trust to fortune to find a market elsewhere. Prime apricots of the largest size have been contracted for readily at \$40 per ton and second grade at prices going as low as \$30. The canners say that prices for peaches and pears will run about the same. The large crop of peaches, however, may run the price a little lower.

**PEACHES AND PEARS.**—The peach crop is the largest in proportion to the amount usually produced of any fruit in the State. The same is true in this county and the State at large. The pack of this fruit, therefore, will be large. The pear crop is light and the demand brisk.

**FINE FRUIT REQUIRED.**—The question this year is more emphatically than ever before one of quality. In an interview one of the largest experienced canners in the county said to the writer: "The fruit grower is slow in learning that it is quality not quantity that we want. Our carry-over every year is of the low-grade fruit, which proves conclusively the tendency of the trade and we are encouraging that tendency as much as we can. It costs no more to put up first-class fruit than it does the low grade, there is more profit for us, it establishes a better reputation for the fruit product of the State and is advantageous in every way. We get stuck on contracts every year and get foisted onto us more low-grade fruit than we want. We have learned by experience not to make a contract with a raiser who has a large amount of small fruit for he is sure to try and push it onto us and we must either accept it or have trouble, and to avoid the latter we prefer not to do business with him. We go around through the orchards the entire year and keep track of those that are receiving good care and are being thinned properly, and those are the men with whom we seek to make contracts."

**JELLIES AND JAMS.**—The demand is yearly increasing for jellies and jams. In the past the shelves of the grocery stores have been filled with a foreign product in this line. The canneries in this State have been pushing the trade on the domestic product and have yearly increased the amount produced and consumed. Now it is recognized that we can put up in this country as fine jellies and jams as can be brought from London and Paris, and the result is our local dealers are substituting the domestic for the foreign product. The California Cannery Association has this year fitted up a large room for the production of jams and jellies and are now working a large force in the production of the same. They have been forced to ship in berries and currants from various parts of

the State to supply the raw product for the manufacture of the finished product. The products are put up in 16-ounce, vacuum glass jars, and are a beautiful sight to behold when stacked up ready for packing in the cases.

**AN EXPANDING MARKET.**—The fruit canning industry has been fortunate in having at its head some of the brightest business men on the coast, and they have worked assiduously and wisely to the building up of trade. Until three years ago there was no cannery combine, and each company worked on its own hook to build up a trade for its product. The formation of the California Fruit Canning Association, which to-day controls about thirty of the largest canneries in the State, is the largest combination of the industry under one management that has yet been effected, and contains possibilities for large operations that lay outside the province of the smaller companies. The canneries have, however, always kept the market in advance of the supply.

In talking with one of the managers of the large canneries in this county a few days since, the question was asked: "Is it not true that the tendency is to increase in the demand for canned fruit and a corresponding decrease in the demand for dried fruit?" "I do not think so," said he. "The canners have simply opened up new markets, and in this way have increased the demand."

However that may be, there is a constantly increasing demand for the canned product, which is very fortunate for the California grower, with the rapid increase in production and the aggravatingly even demand for the dried product, which is resulting in constantly increasing surplus and decreasing prices.

**THE MARKET.**—It is the opinion of a number of canners that the best market for California canned fruits is in the United States. Because of its great wealth and the earning capacity of the masses, more fruit is consumed by it than by any other nation, although the United Kingdom is a large buyer. Fruit is recognized as it never has been before as a dietary necessity, and with a proper regard for quality and the natural increase in the world's population the markets for California's canned fruits are of almost indefinite expansion. The canners of Santa Clara valley have demonstrated what can be done in this direction, as they have been compelled to double their aggregate capacity during the past two years, and they are convinced that still greater facilities for meeting the increasing demand for their products will be necessary in the very near future. For the fame of Santa Clara's canned fruits has gone forth throughout the world; they may be found in all countries on the tables of royal families, the wealthy and the humble working man alike, and they are none the less a luxury because they are becoming everywhere recognized as a cheap, healthful and almost essential feature of the family dietary.

I will quote further from the address of Mr. Nelson in speaking of the gigantic operations of the canners' combine:

"The institution with which I have the honor to be connected is a market for one hundred or more million pounds of fruit, which is put up in its twenty-eight factoris, and employs something like 9500 men, women and girls to handle the same. To these are paid during the canning season over \$750,000 in wages. Its output of fruit and vegetables annually exceeds 60,000,000 cans, a no small factor in supporting the fruit industry of the State."

**INCREASED PRODUCTION.**—The canned fruit pack of the State has grown from 1,495,000 cases of two-dozen quart cans in 1890 to more than 3,000,000 cases in 1899, and of this quantity the Santa Clara valley canneries have put out about one-third, and the fact that this single county should produce one-third of the whole canned product of the State speaks volumes for the special excellence of its soil and climate and the extent, variety and superiority of its fruits. The pack of 1900 fell somewhat short of the 1899 pack, owing to a shortage in certain varieties of fruit that are favored for canning, but the canneries of the valley have been steadily increasing their capacity, adding the very latest devices to their costly outfit of machinery, and enlarging in every way the scope of their operations. The art of canning has become so perfected, the selection of fruit for this purpose is made with such care, canned fruit retains its freshness of flavor for so long a time, and the cost to the consumer has been reduced to so low a point that it is not surprising that California canned fruit, and particularly the product of the Santa Clara valley canneries, has found a ready market in every country on the globe.

Santa Clara county has eight canneries, the plants of which involve an aggregate investment of over half a million dollars and employ in the season about 4000 men, women and children in their operation.

### The Canners and the Apricots.

Apricots are now being handled at a lively rate by the canneries. The San Jose Mercury sketches the trade as centered at that city in the following pertinent way:

**SHORT CROP.**—This crop is exceedingly short, not

only in the county, but over the State this year. For weeks local growers have held that 'cots should bring \$35 and \$40 this year, if not even better. Since the import duty was put on by England buyers were talking of only \$25 to \$30 at the most, and some thought \$20 and \$25 would be the outside limit. But growers have held firm for a better price, and many have said that they would dry their fruit if they could not get \$35 and \$40 and take the risk on the dried product. It now appears that the consumers have been hustling around this week for fruit, and realizing the scarcity and full situation have been bidding right freely. While the canners may not desire to pack so heavily as some seasons it seems that there will be demand for all the choice fruit the valley will produce this year. All things considered it seemed yesterday that the market would be firm at \$35 and \$40.

**SOME FIGURES GIVEN.**—Manager Dixon of the California Fruit Canners' Association, with the big plant on Sunol street, said: "Yes we are now buying apricots and are paying \$35 and \$40 a ton for choice fruit. We shall run our plant full force and will buy freely. We have contracted some already."

"No, none have been delivered yet, but we expect some fruit on the 5th or 6th, when we will begin the season's pack."

Manager Chase of the Golden Gate Packing Co. said his company did not expect to pack as many 'cots as usual. "In fact," said Mr. Chase, "so far the demand on the part of canners is light. There was a carry-over from last season and besides the import duty put on apricots by England shut the canners out of that market."

"We are in the market for few 'cots. So far we have contracted none except a few where we bought the crop of 'cots with other fruit. The best price I have heard mentioned for apricots of the highest grade is \$35. The prices I have heard mentioned are \$30 and \$35 as the best. Growers have been holding for \$35 and \$40."

Manager Tibbetts of Campbell Fruit Growers' Union said: "Apricots are bringing \$30 and 35 readily. I have heard of \$40 being paid but I am not personally aware of the facts. I do know that \$30 a ton has been paid for entire crops, all the fruit being taken. The \$35 a ton has been paid for selected fruit."

**POSITION OF GROWERS.**—Growers insist that \$35 and \$40 is only a modest price for the fruit this year. One grower, in speaking of the market conditions, said he saw no reason for canners to become alarmed at England's import duty. "Only the rich people of that country buy the canned apricots," said he, "and the three cents a pound additional price will not deter them from consuming the usual amount of the fruit. I do not know how much of the carry-over fruit there is in England but I can see that if this is large it might have a material booming on sales then from this season's pack. But with only a moderate carry-over there and at home, prices should be good for all on hand and those to be picked, as the crop is but a small per cent of a full crop."

**ENGLAND'S LAW.**—In regard to England's duty on fruit it can be said a duty on canned fruit has been placed on apricots imported into England of 72 cents a case on extra standards, while on pears and peaches only 10 cents per case. On extra apricots 80 cents per case and on peaches and pears only 12 cents per case. On apricot pulp 7s (\$1.63) per 100 pounds. The same duty which applies to apricots applies to plums. This duty on apricots is almost prohibitive in comparison with that on peaches and pears, as it will turn the consumption almost entirely in the direction of the latter fruit. The total amount of canned apricots shipped to England last season from the State would amount to about 5000 tons of green fruit, or 10,000,000 pounds.

### Poisoning Gophers.

**TO THE EDITOR:**—A very effective way of ridding the orchard of gophers is by taking what you can hold in your hand of filaree and sprinkle it with powdered strychnine; place this in the gopher's hole, whereupon he will immediately pull it in and commence to eat it, as also will any young gophers that may be in the hole. By this means the old and young are killed at once, and the ground is soon free from them. Of course, it is best to get the main runway if you can, and put the filaree each way, so as to be sure to catch him wherever he is working. In districts where no filaree can be obtained, green alfalfa is equally as good. It is prepared in the same way.

For the last five years I have used no other means of destroying them, finding that the traps were not as good. Where traps are used, you only catch one gopher, and if he slips the trap he can never be caught again; but where the poisoned alfalfa or filaree is used, it is brought into the hole and all eat it, thereby probably killing three or four at one time. I go over the orchard in the springtime, after plowing, about three times; later on, in about two weeks, I go over it again and in two or three weeks later go over it again, and that settles the gophers. I have tried prunes and raisins, but they refuse to eat these articles, as they are not their usual food.

Santa Clara.

E. P. BODEN.



## Agricultural Review.

### ALAMEDA.

**THE BARLEY HARVEST.**—E. C. Whipple, in Niles Herald, July 5: There have been 800 acres of barley harvested on the Whipple ranch. There were employed five self-hinding harvesters, eight men hunching the cut grain and six men with the thresher. The yield this year was very heavy, running as high as thirty sacks to the acre, but averaging about twenty-five. This will give us about 20,000 sacks. Barley is quoted at 80 cents now, with no demand. Sacks are selling at 8½c., with the outlook that they will go to 9c. before the season closes. Several years ago barley brought \$1@1.50, while sacks were selling at 4½@5c. Alameda county alone could use all the sacks made annually at San Quentin.

### CONTRA COSTA.

**DRIED FRUIT GOING TO DISTILLERY.**—Antioch Ledger, July 6: Several large schooner loads of raisins, dried prunes, apricots, peaches, etc., arrived at the distillery last week. About thirteen people are at present employed. Fruits of all kinds will continue to arrive as fast as the boats can make the trips, and work at the distillery will last into November.

### FRESNO.

**HARVESTER AND GRAIN FIELD BURNED.**—Hanford Sentinel, July 4: J. B. Williams, who has been at work on a harvester down between Huron and Coalinga, has returned to Hanford. The harvester he has been with belonged to Tom Allen, and it took fire from a hot box Thursday and burned. Charles Tyner of Hanford was the driver of the 26-horse team that was on the machine at the time of the accident, and Mr. Williams states that had it not been for Tyner's presence of mind some of the horses would have been burned before they could have been taken out of the team and placed in a safe location. As it was the harvester was all burned and forty acres of good barley with it. The grain belonged to E. Arnold, and was insured for \$2.50 per acre. The field included 200 acres and the crop is good, yielding about eight sacks to the acre. There are 160 acres of the crop remaining, and another harvester has been engaged to cut the remaining crop.

**BIG GRAIN AND PASTURE FIRE.**—Reedley Exponent, July 4: Last Friday one of the worst grain and pasture fires occurred on W. L. Heine's ranch, in Clark's valley, that has visited this section for several years. Over 800 acres of grain were burned, besides some 3000 acres of pasture and considerable fence. G. W. McNear had a quarter-section burned, but not much damage. Had it not been for the Wright Bros. threshing crew there, McNear's damage would have been very great. Mr. Heine's grain was partially insured, but his pasture, hay and fences are a total loss. Friday evening the fire went over the hill into Hills valley and stopped temporarily in an old manure pile near where H. C. Myers lives, smouldering there for some hours. The fire fighters had gone home, thinking no more damage would be done. In the early afternoon of Saturday a whirlwind picked up some of the fire and carried it into the pasture and grain fields in the valley. It burned over most of Mr. Myers' ranch, destroying 140 acres of grain, several hay stacks, not insured; also, 140 acres of grain on the Reedley Improvement Co. land, farmed by J. W. Carpenter. The fire then crossed the corner of C. H. Hill's ranch to the hill and over into Wootan valley, and burned a quarter-section of Mr. Hanson's grain and many acres of pasture, fences included, where, by back-firing, the fire was stopped.

### GLENN.

**RAISING OATS PROVES PROFITABLE.**—Willows Promoter: One of our prominent farmers was informed that there was more profit in raising good oats than in wheat or barley. He experimented on some of his land this season, and was very much surprised to see the immense yield. It has turned out from forty to fifty sacks to the acre and has averaged 105 to 110 pounds to the sack. Good, clean oats not only afford a ready market, but bring here on the cars from \$1 to \$1.10 per 100 pounds, which allows a fair profit to the owner.

### KINGS.

**BET SUGAR PROPOSITION.**—Hanford Sentinel, July 4: Hubert Dyer, representing the Dyer Sugar Co., has been in Hanford for several days, and is surveying the field in this county for the purpose of establishing a factory here, if sufficient guarantee of acreage can be secured. He wants a guarantee that from 5000 to 6000 acres of beets will be produced here annually, for which he will contract for three years at \$4 a ton delivered at the factory. In addition to this, he would

like say forty acres of land for a factory site. His company would immediately invest \$500,000 in the enterprise if this guarantee is made.

### MONTEREY.

**TALL OATS.**—Salinas Index: David C. Vierra was over from Moss Landing yesterday and presented the Index a specimen of black oats raised on the old Cato J. Vierra farm near that place. The stalk of the oats in question is 8 feet 6 inches in length. Two years ago C. F. Langley had some stalks which measured 8 feet.

### RIVERSIDE.

**EARLY CANTALOUPE.**—Los Angeles Times: There is quite a boom in the marketing of early melons at Indio these days. The growers are sending out eastward about three carloads a week. Their market is Chicago. The fruit is netting the growers about \$2.50 a crate of forty-five melons each. Fifty and sixty crates are sent to San Francisco daily, and some are disposed of in the local markets. The cantaloupes are ripe at Indio before the plants are up at Rocky Ford. The farmers at Indio are producing about seventy-five crates to the acre this season, which brings quite a neat little revenue at present prices.

### SANTA BARBARA.

**LIMA BEAN CROP.**—Nordhoff Ojai: Frank E. Barnard, representing J. K. Armsby of Chicago, who is now contracting for beans and fruit, estimates the Lima bean crop of Santa Barbara and Ventura counties at 1000 carloads. The crop last year amounted to less than 175 carloads. A great many farmers are reported to have already contracted their bean crop for \$3.50 to \$3.75 per 100 pounds.

### SANTA CLARA.

**BIG PACKING HOUSE CONTEMPLATED.**—San Jose Mercury, July 7: A very important step may soon be taken by the directors of the California Cured Fruit Association in the building of an immense warehouse and packing house at Santa Clara. The negotiations which have been carried on with the Packers' Company ever since the annual election have not yet resulted in the agreement as to modifications of the contract desired by the Association, and, if this agreement cannot be made, it is the present intention of the Board to provide storage room for the new crop, independent of the packers, and do their own packing. It was in connection with this policy that the differences in the Board arose which led to the resignation of President Bond, though the policy itself received the endorsement of the Board. Judge Bond was made a member of the executive committee, and there has been no change in the policy of the Board in this respect because of his resignation. This is, of course, only one of the possibilities and depends upon the outcome of the negotiations with the packers. Looking forward to the possible necessity for providing facilities for handling the crop, the Board studied the situation, and it seemed the best location for the large general packing house that would be required was Santa Clara. There is a tract of land belonging to the city adjacent to the depot, which the city is willing to lease for a long term at a nominal rental. This is convenient to both railroads, and the best situated location to be found in the county. It is proposed to erect there, should such a policy be rendered necessary, a packing house 300 feet long and 80 feet wide, equipped for handling the large crop of Santa Clara prunes. It is understood that this policy of providing for the coming crop, to avoid the necessity for sacrificing the prunes on hand to make room for the new crop, does not meet with the approval of the newly elected member of the Board, J. O. Hayes, and that his resignation will be tendered to the Board at its meeting Wednesday next. It is likely that at that meeting some definite action may be taken with regard to this matter.

### SAN JOAQUIN.

**BIG GRAIN FIRE AT FOREST LAKE.**—Lodi Sentinel, July 6: Six hundred acres of grain on the McCauley farm, near Forest Lake, 3 miles north of Acampo, were lost Tuesday forenoon when fire swept over that section. Farmers fought hard to check the progress of the flames, but a high wind carried the fire along through the big farm and into adjoining fields. The news reached Lodi that after crossing the McCauley ranch the fire moved rapidly eastward. It is believed the fire started from a passing locomotive.

### SACRAMENTO.

**GRAIN BURNED.**—Record-Union, July 7: Phil Reihl of Freeport telephones that about noon a fire started in the 75-acre grain field of an Italian named Gonzales, near Walker's Landing, on Grand island, and destroyed the entire crop. Part of the grain was standing and part in sacks. Only a portion of the loss was covered by insurance. Walker's Landing

is on the west side of Grand island, on Steamboat slough. The presumption is that the fire was caused by sparks from a threshing machine.

### SONOMA.

**WHITE BLACKBERRIES.**—Healdsburg Tribune: One of Luther Burhank's wizard productions found its way into the Tribune office on Tuesday in the shape of a box of white blackberries. They were raised on the farm of J. L. Rodgers in Dry Creek, near Healdsburg. The berries were of good flavor and, eaten with the eyes shut, could not be distinguished from their "coon" ancestry.

### SUTTER.

**PACKING PRUNES.**—Sutter County Farmer, July 5: Quite a force of men have been at work for the past week at the Wilkie drier, packing prunes for the California Cured Fruit Association. The prunes are put up in fancy boxes and from six to ten carloads will be sent out.

**PEACHES PLENTIFUL BUT SMALL.**—Sutter Independent, July 5: Nearly all the peach orchards in this section of the valley show the crop to be exceptionally large, but, owing to some unfavorable condition of the climate or soil, the size of the fruit will be below the average. While it is a fact that a peach makes a rapid growth after it commences to ripen, which state has not yet been reached in most late varieties, yet the size at the present time is not up to the standard. This is especially noticeable in the orchards of T. E. Holmes, James Murray and the Walton slough orchard. Some attribute the condition to the extremely cool nights which have prevailed, with a few exceptions, during the past four weeks.

**WHAT ALMOND GROWERS EXPECT.**—Sutter Independent, July 5: Many of the local almond growers anticipate good prices for their crop this year. Though there are no buyers in the field as yet, letters received from firms and growers below indicate that the prices for the past three years will be maintained this season. H. C. Clark, a prominent local grower, has a letter from a large grower below advising him that the Hatch varieties will readily sell this season at 10@10½c; that the Lanquedoc variety will not fall below 7½.

### STANISLAUS.

**AMOUNT OF WHEAT IN A SQUIRREL'S JAW.**—Oakdale Leader: L. L. Huntley of Burwood says that on examining the pockets of the jaws of a squirrel that he shot recently, he found by a careful count 392 kernels of wheat. If the destructive little gormandizers each store away an equal quantity daily where they number hundreds in many fields, some estimate can be made as to the extent of their ravages upon the farmers. Mr. Huntley further said that, notwithstanding he is 75 years of age, he has killed 200 squirrels with a 32-caliber rifle during the present year, and that in all probability he annually shot and killed more squirrels with a rifle than any other man in the county or State. He believes by this means, if generally adopted, the pests would be exterminated.

### TEHAMA.

**SOME LARGE APRICOTS.**—Red Bluff News: Harry McGovern exhibited the other day a number of apricots grown in this vicinity that are probably as large as any that have been raised this year in the State. On a small twig, not over a foot in length, were eight apricots that were as large as the average peach of this time of the season. The tree from which they were taken, he says, was loaded with fruit and the family for some time have had all the apricots they could use from the one tree.

**SALE OF GOATS.**—Red Bluff People's Cause, July 6: The Conklin Bros., of Newville, sold and delivered last week 1700 Angora goats to E. J. Etter, Mendocino county, and received \$3.75 per head for them. They have made a specialty of raising goats for many years and have been quite successful at it.

**THE YIELD IN ANTELOPE VALLEY.**—Red Bluff News, July 6: John Clayman of Antelope valley has finished harvesting his crop of wheat, which was Little White Club, which went a little over ten sacks to the acre. His neighbor, John Gurnsey, sowed Golden Gate Club and he was surprised at getting only about seven sacks to the acre. A month ago he had as fine a stand of grain as could have been found any place this year, and many people estimated that his yield would be thirteen sacks per acre at the very least. What caused the great falling off was the continued north wind which threshed out nearly 50%.

### TULARE.

**BIG HOGS.**—Tulare Advance: J. Frazier of Woodville brought into town two hogs that he had been fattening just one

month. One month ago the hogs weighed 166 and 146 pounds, respectively, and when weighed after having been hauled in from the ranch, it was found that each hog had gained 2½ pounds a day for thirty days. Two and a half pounds a day is a good weight to put on a small hog.

**BIG GRAIN FIRE.**—Visalia Times: The grain fire which took place near Fountain Springs, Friday, destroyed a lot of grain. From the best obtained information, following are the names of those who lost their crops, together with their acreage: L. W. Howeth, 900 acres; John Gill, 260 acres; Mrs. Ogan, 160 acres; T. H. Pursell, 160 acres; A. Hamilton, 160 acres; Peter Norton, 160 acres; Matt Flynn, 160 acres. All but the last two carried insurance on their crops, with a total of \$500. The loss is placed at about \$10,000. Besides grain, a large acreage of wild feed was burned over, and this loss will be a severe one to sheep men, as thousands of sheep are pastured in that section.

**TOMATO BLIGHT.**—Visalia Delta, July 4: Orland Moore was down from Venice Tuesday with a big load of melons and a small lot of tomatoes. He said that the melons were ripening very fast. When asked regarding the tomato blight, he stated that his vines were somewhat affected, but that he pulls them up as fast as they show symptoms of blight and throws them into the ditch to be carried down stream. This is right, so far as pulling the vines up is concerned, but they should be burned. Mr. Moore has been investigating tomato blight, and says that in the specimens he examined he found a little white worm in the stem, just where the first roots begin to branch. He is not at all positive that the worm causes the disease, but he has a strong suspicion that it does.

### YOLO.

**CROPS TURNING OUT BETTER THAN EXPECTED.**—Woodland Mail: A. E. Elton of Yolo says that grain, especially barley, is turning out much better than was expected, and that farmers are jubilant over their prospects. J. T. Cooper, whose ranch is northeast of Cacheville, is one of the happiest farmers in that section of the country. He expected his barley to yield about sixteen sacks to the acre and it averaged twenty-six. Louis Abele got about thirty sacks to the acre, which is more than expected. In fact, almost everywhere barley is turning out from two to five sacks per acre more than calculated on. C. H. Bork last year built an addition to his warehouse, with a capacity of 2500 tons, making the capacity of the whole 7500 tons. He expects to fill it this year, which has not been done for several years past. Wheat harvesting has not commenced generally yet, and it is too early yet to state with any degree of authority what the yield will be. The several pumping plants on orchards and alfalfa fields are in operation in that district. The gophers have been numerous during the year, and so far most of the water has been consumed in filling gopher holes beneath.

**GRAIN FIELDS BURNED.**—Woodland Mail: There was a disastrous grain-field fire near Madison Sunday. The south 500 feet of the Madison bridge, which spans Cache creek at a point north of Madison, was destroyed, and the growing grain and fences on John Archer's place, together with 1000 acres of grain and thirty tons of hay on J. R. Jones' place, went up in smoke. The residence of John Archer and his father came near being destroyed. They were both on fire several times, and it was only by the hardest work that the buildings were saved. It is estimated that the county has been damaged by the destruction of the bridge between \$3500 and \$4000. John Archer's loss is \$2500, with no insurance, and J. R. Jones was damaged about the same amount. The fire is supposed to have originated on the bank of a creek, a few hundred yards above the bridge, where some Spaniards were camping. Frank Chiles, whose ranch is 1½ miles east of Davisville, suffered a loss of some \$5000 from a grain fire that swept over a large portion of his ranch Thursday afternoon. A. Montgomery and others lost by it also, but Mr. Chiles is the principal sufferer. A grain fire last week destroyed about thirty acres of grain and a quantity of hay for Sheriff Griffin on the Balfour-Guthrie ranch, north of town. The fire also took in a part of Ed Graf's land adjoining and burnt up about seven tons of hay in the shock. Griffin's grain and Graf's hay were insured.

### YUBA.

**GREAT DEMAND FOR BOATS.**—Marysville Democrat: Because of the large acreage of wheat and barley and the fairly large yield, the demand for transportation facilities is greater this year than ever before. Owners of river boats and barges are preparing every one and building others for the season's traffic on the Sacramento river.



## THE HOME CIRCLE.

## The Jester.

They rode together down the claustral aisles  
Of the dim woodland. From the cool retreats  
And leafy privacies the mated birds  
Ruffled their throats in song. High overhead  
The sun coursed a diaphanous sky, and sent  
Through swaying boughs his javelins of gold.  
A slender stream rang all its crystal bells  
'Twixt banks of moss and fern beside the way  
Whither they passed unheeding. The sleek steeds  
Set noiseless hoofs on mast and russet leaves,  
The last year's fallen glory. Each was young,  
And she was very fair. His arm was zoned  
About her; the twin roses in her cheeks  
Flamed as she drooped against him, her bright hair  
Flowed o'er his shoulder, and her dancing plumes  
Swept his bronzed cheek.  
Then were they ware of one  
Who, bowed and tattered, in the shadow stood  
Leaning upon a staff. His sightless eyes  
Were bent upon the twain, a flickering hand  
Was out-thrust towards them, while across his breast,  
Stained with unseasonable rains and dews,  
The legend ran, "sweet folk, alms for the blind."  
With little sounds of pity they drew rein;  
Upon the pleading palm a coin was laid,  
And conscience-free they pricked along their path,  
Till suddenly, from behind, a peal of mirth  
Caught them as with a buffet, and they turned.  
Then from his face the beggar plucked a mask,  
His ragged garments from his body slipped,  
And they beheld the dazzling wings of Love.

—James B. Kenyon in Atlantic Monthly.

## A Distinguished Amateur.

Some people said afterwards that it was Fate. Mrs. Arlidge said so, and she ought to have known. If Fate had a hand in it, she is to be congratulated for once.

She began her campaign—assuming it was she—at one of the always impromptu meetings of an informal combination of smoking club and debating society, consisting of three men who could talk unweariedly—and hardly tell a single anecdote, either—till 3 o'clock of the morning following any evening they chanced to meet. Their discussions, conducted with varying skill and unvarying enjoyment, were usually on out-of-the-way problems of character and incident. Men of considerable ability in their daily work, they let no question concerning it encroach on their debates. "What should I do if such a thing happened in the commercial world, or the legal world?" had not sufficient speculative interest for smoking hours; these practical decisions and the laws that governed them were matters of action. But "What should I do if a masked burglar with a loaded revolver in each hand came and asked me if my great-aunt's hair was gold or black?" was a question of real interest, involving questions of truthfulness, invention, probability and judgment of character.

This question, or a somewhat similar one, was under discussion one night, and after about an hour's debating the youngest man of the party summed up his personal intention briefly:

"I should tell him to go to —." He mentioned the locality.

"That would be silly, Jimmy," remonstrated the eldest, Mrs. Arlidge's father. "You might provoke him into shooting, and then perhaps you'd go."

"Not much danger! A burglar isn't in business to lose his temper if you speak uncivilly to him."

"I wonder what a burglar feels like," mused Jimmy. "He must feel pretty small, I should think."

"It's not a large business," assented the eldest man. "But perhaps it's re-deemed in his eyes by the pluck it requires."

"I suppose it requires pluck to be a sneak, if you are not born one," Jimmy said; "but I don't think it takes much other pluck."

"Perhaps they're all born sneaks," suggested the third man, "and are saved the trouble of being plucky at all."

"You young fellows shouldn't think being plucky any trouble," said their elder.

"I don't know whether it's any trouble or not," Jimmy said. "I never tried. But I believe I could slip into your house, sir, and carry off all the silver on the sideboard, without being caught or even scared."

This particular debating club assisted its researches by practical experiment, when possible, and in such a case the man who suggested the experiment usually carried it out, as in children's play the child who proposes the game is obliged to take the isolated part. So Jimmy, though he spoke without thinking, was not surprised at the elder man's answer.

"The silver on the sideboard's all plated, I believe, and wouldn't be any use to you. But you can run along and try. We'll wait here for you; it isn't far. I don't believe you can get a dollar's worth of even quadruple plate out of the place."

Jimmy stood up and buttoned his coat, laughing.

"All right," he said. "If you want your house burglarized, I'm ready. Ah! your son doesn't sleep with a revolver under his pillow, I trust!"

"No; and you couldn't wake him if he did. You can tell us how a burglar feels when you come back. It's only half-past one, and we'll wait for you."

"Au revoir, then." And Jimmy departed.

When he was safely out of hearing the householder whose goods were in danger laughed aloud.

"You see," he exclaimed; "Jimmy doesn't know that my daughter and niece came home for a visit to-day—and he's never seen either of them. If they're only awake!"

"Why, he may frighten them awfully! He didn't know there were any girls in the house."

"They won't be afraid, with Jack there. They don't know how hard it is to wake him. I'd give those girls \$10 apiece if they'd only get in his way somehow, just so he'll have some human sympathy for burglars after this. But he won't be able to get in without tools. The place is locked up."

The place had been locked up, and the girls had gone upstairs two hours before the burglary was planned. But, having sat down at the head of the stairs to talk a minute, instead of going to bed, they got up when the minute had passed, and it was 2 o'clock in the morning, instead of nearly 12 as it had been shortly before, and went down stairs again in quest of biscuits.

"Jack must have been smoking here," Mrs. Arlidge said, as they entered the dining room. "I'll open the window."

She leaned out for a moment into the sweet, cool air. "What do men ever smoke for, Gwen, I wonder?"

"I wonder?" echoed the girl.

As this was beyond guessing, they turned their attention to the less depressing subject of supper.

"We'll have to go down cellar for the milk." It was a very few seconds after they had gone on this errand, taking the lamp with them, that Jimmy, in his cautious and nerve destroying explorations, came in sight of the dark, open window.

"Didn't I say it was easy?" he told himself, crawling carefully in and turning the light of his lantern about the room. "What did they leave a window open like that for, I wonder? There's the sideboard. I'll just annex that little jug and get out." He took three steps away from the window and halted in horror. A line of light showed un-

der the door leading into the hall, and a girl's voice reached him.

"That lamp will explode if you tip it like that," and the irresponsible answer—

"Well, aren't you ready to die?"

He was, he thought, a good deal readier than to live though the next few minutes. He flashed his light about the room again, in dizzy haste, and saw another door, nearer than the treacherous window. He turned its handle softly, and stepped into a small closet, that had an unnecessary number of shelves, when one considered how little space they left for an unfortunate housebreaker. In a moment the girls were in the room; he could hear their voices more plainly, and then the light rattle of glass and china. Did young ladies usually eat at two o'clock in the morning? His heart was beating violently, and his hands were cold, but he fought valiantly for a little self-command and philosophy. "It can't be very long," he assured himself; "they won't eat much at this hour; they'll be too sleepy. Why didn't that brute tell me his daughter was home?" He hadn't thought of the other; she was merely a figure to fill up the canvas of this nightmare picture. Why didn't they talk? They'd hear him breathe if this silence continued. As a matter of fact, it continued altogether about half a minute, while Gwen was pouring out the milk and Janet was getting the spoons from the sideboard.

"You said, I believe," (Mrs. Arlidge was reverting to the talk on the stairs) "you said that the soul never was cowardly, that cowardice was of the mind or the body—but never of the soul." ("Then I haven't got a soul," Jimmy thought. "There isn't a scrap of me that isn't afraid now.")

"Did I say all that?" This was a different voice, and the surprise of it sent a little shiver down Jimmy's spine. "Maybe I meant that that was a possible theory. But it looks reasonable, now, doesn't it, that souls might all be made of good material; that there isn't any bad soul-stuff, but the evil is all in the part outside of the soul?"

"No, it doesn't look a bit reasonable—unless the soul is as obsolete as the two-toed horse. I'm too much of a pessimist to believe that."

"To believe that the soul is obsolete?" laughed Gwen.

"No—that evil comes from anything less—less primal than the soul itself." ("Is that what girls sit up late to talk about?" wondered the silent auditor.) "But you haven't told me the poetry that put that into your head," Janet went on. "Let's hear that."

"If I can remember it." ("If they'd only go to the library to get the book," thought Jimmy, and was surprised to find he was glad they didn't.) Gwen's memory was equal to a verse or two of "Abt Vogler," and as Jimmy listened he concluded that beautiful voices should always say beautiful things, with youth's headlong imperious demand for fitness. Up to this night he had always thought Prince Geraint somewhat precipitate in his conclusion on hearing Enid's voice, but was he so really?

"The evil is null, is naught, is silence implying sound," Janet repeated slowly. "Well, I'm sure I hope it is. But, speaking of souls, now, did you ever meet a person who had one?"

"Why I didn't suppose I had ever met a person who hadn't."

"Your charity will be the death of your common sense some day," commented Janet, compassionately. "Father says he knows two men who have," and Jimmy heard his own name mentioned as one of these. He turned hot; they were going to talk about him? ("The old man can't square this by saying I have a soul, either.") Why couldn't they go on discussing abstractions, so that he shouldn't be eavesdropping—at least not so much? It didn't seem dishonorable to listen to their views on spiritual matters, especially when he couldn't help himself, but he felt uncomfortable when he heard his own name. "Father calls him Jimmy," Mrs. Arlidge went on. "Isn't it odd to think of a grown man called Jimmy?"

"Jimmy," the other said. "I like it." ("Glad you do, ma'am; so do I when you say it.")

"And father says he's a fine-looking fellow, too." (A grin illumined the darkness of the little cupboard. "But the old boy can't even square it that way.")

"Jimmy—and fine looking—and possessed of a soul," Gwen said, counting on her fingers. "Go on. Have the gods given this curled darling anything else?" ("Oh, come now, you needn't make fun of a fellow. I'm not so handsome as all that.")

"Father's idea of a soul may be peculiar," Janet explained. "They do the craziest things, father and this Jimmy, and another man—who also has a soul, I believe. In fact, when father says soul, I think he merely means ability to do you crazy things without feeling like a fool." ("Then I haven't a soul; that's twice to-night. I'll be a Darwinian ape before they're through with me.")

"I get reports of their doing in father's letters," Janet went on. "He says they like to understand things; I think they haven't enough to do to keep them out of mischief. Once Jimmy and Will—that's the other—hired a hand-organ and dressed in some dreadful old clothes, and went about the streets just to see how it felt to have coppers given them."

"Did they want to write a newspaper article?"

"No—I don't believe they know one end of a pen from the other." ("I do, too!") "They just wanted to see what it was like."

"That was the simplest way to learn," Gwen commented, laughing approvingly. "Go on. Jimmy's history seems to be more entertaining than that of most young men." ("If she only knew how very entertaining she would find this present chapter!") Jimmy listened for half an hour to accounts of his own absurd doings, and thought how small a chance there was that a girl would think such a man anything but a hopeless fool. However, Gwen only laughed and asked for more, saying finally—

"He'll grow up after a while, you know, Janet, and then just think how nice he'll be."

The next words Jimmy heard drove even these out of his mind.

"If you ladies'll just keep quiet, I won't hurt you, but ye'll tell me the combination of your father's safe, ma'am." Jimmy pushed the door of his cupboard a crack open, and saw an ugly-looking man leaning in at the open window and covering Janet with a revolver. He bent down in his narrow quarters and began to unlace his shoes swiftly, the unnecessary shelves making indentations in his person as he did so.

"I don't know the combination," gasped Janet, while Gwen's hand crept along the table and closed round the handle of the bread knife. The burglar climbed into the room, watching the girls warily.

"No, but it's a new safe, and the combination'll be written down somewhere, and you can find it for me, I guess." He still covered Janet with the revolver, yet she hesitated, to gain time, and sought hurriedly for some expedient. The burglar, watching her indecision, moved forward, leaving the door of the cupboard behind him. Gwen saw this door swing open noiselessly, and a man step out. Their eyes met over the burglar's shoulder, and instead of crying out, she bent her head slightly in answer to his hasty telegram, and turned to Janet.

"Tell him," she urged. "We'll only be killed if you don't," and her voice shook a little with excitement.

"I suppose I could find it," Janet said, hesitatingly. She had kept her eyes away from the revolver, and therefore had not seen Jimmy, but she trusted Gwen's wit. "But we'll have to search in the library."

"Lead the way, then, and if either of ye try to bolt she'll get shot." Gwen turned to the door, but stumbled and fell, catching at the table-cloth as she went down, and bringing the dishes to the floor with a crash. The moment's confusion was long enough for the single stride Jimmy had to make, and as Janet bent to help Gwen up a bullet went harmlessly into the ceiling, and the revolver dropped to the floor, Jimmy's iron grasp on the man's wrist loosening the clenched fingers. Gwen, on her



feet in a moment, darted upon the revolver, and sprang back with it in her hand. But the burglar, unlike the British soldier, knew defeat when he saw it, and waited for no trial of strength with Jimmy. He wrenched his wrist free and sprang to the window, skillfully overturning a chair in Jim's way as he went, and thereby delaying pursuit the necessary thirty seconds. Jim gathered himself wrathfully up, and rushed to the window, but this captive was out of sight in the darkness.

"The brute has gone," he said, facing about.

"You didn't want him for anything—did you?" gasped Janet.

"I wanted him for the penitentiary," he answered, with emphasis. "However, he's clean gone now, and he didn't get anything." Jimmy knew that this end justified the erratic and irresponsible means but nevertheless he hastened to dissociate himself in the young ladies' minds from the house-breaking profession.

"Will you let me explain my own most unwarrantable presence here?"

He fumbled for his card and gave it to Janet.

"Your father thought I couldn't get in here and steal some of his silver and escape without being caught, and I thought I could, so I came—he's waiting over at Will's for me to come back and report now. I find he was right. But let me say in my defence that he didn't tell me you were home. It's just one of these indefensible lunacies you were telling about," he concluded. His eyes turned to Gwen, and he knew now that Prince Geraint was most deliberate and wise.

"Indeed," Janet said, offering her hand, "it was most fortunate for us that father's—eccentricity—took this form to-night—and we are very grateful to you. I don't know what father has in his safe, but I suppose he wants it or he would not lock it up with a combination. Gwen, it's not necessary to tell you who this is—my cousin, Miss Martin."

"I am happy in meeting so good a fighting comrade," he said, as he bowed, glancing at the weapon still in Gwen's hand.

"Oh, put that pistol down!" uttered Janet, nervously. "You'll shoot your own feet!"

"I never shot anything in my life," Gwen said, putting the revolver down gingerly; "and do you think I'd begin with my own feet?"

"Were you keeping it in case I turned out to be a burglar, too?" asked Jimmy.

"No—I knew."

"Take the bullets out of that thing, please," begged Janet. "It might go off."

"I thought they always went off when they were not loaded," Gwen said, as Jimmy complied with Janet's request. "But it certainly looks much safer empty."

"Depends on what you want it for," Jimmy said. "If I had a safe with an attractive combination lock in my house I should prefer a loaded revolver, myself. Hadn't we better call your brother before I go, Mrs. Arlidge, so that I can help him see if everything's safe?"

"Surely that pistol shot must have waked him," Janet said. She went into the hall and listened at the stairfoot. Jimmy turned to Gwen.

"Truly, Miss Martin," he said, pleadingly, "I'm nothing worse than a fool—though I'll admit I look like a pretty large one to-night."

"You are better than most folk, then," she answered, lifting her laughing eyes to his with a sense of intimacy that she thought arose from the unusual circumstances of their meeting. "Seriously, we have cause to be deeply obliged to you and the foolishness was as much uncle's fault as yours. Oh!" she stepped back with a sudden recollection, her face sparkling with humorous dismay. "Oh—you must have heard us taking of you."

"Yes; I'm sorry, but I couldn't get away. And—I'm going to grow up as fast as I can."

Janet came in from the hall at that moment.

"He's not stirring," she said. "Will you wait while Gwen and I go and

wake him? I'm afraid to go upstairs alone; there's a loaded pistol around every corner."

"I'm sure there is," uttered Gwen, sympathetically. They went off after asking Jimmy to fasten the window, and he stood staring out through the glass and wondering how soon he could grow up.

His young hostess returned in a few minutes, accompanied by the sleepest young man that ever declined to wake for burglars.

"If you had gone to bed like sane girls," he said, reprovingly, "that poor burglar could just have got what he wanted without bothering you, and I shouldn't have had my beautiful sleep knocked into a cocked hat. However, we'll see if things are all right this time if you promise to stay in bed and let the next robber that comes along take what he likes."

The young men explored the house and garden, tried all the fastenings, and finally returned to the dining room, where Gwen and Janet had gathered up their broken dishes and were awaiting their report.

"It's all safe, now," Jimmy said, "and there's not a burglar on the premises but me, and I'm going."

"But not empty-handed?" Gwen asked. "Uncle will laugh at you." She brought a little silver cup from the sideboard. "Show him that, and tell him you've buried the rest in a vacant lot."

Jimmy put the cup in his pocket, laughing.

"But, you forget I'm a reformed character, Miss Martin," he said. "You make me feel like the man who got away with the good bishop's candlesticks."

The good-nights said and Jack gone to the door to let Jimmy out, Janet looked at Gwen humorously.

"I always thought you were a most direct and simple person," she said, "and here I find you giving this lad a piece of silverware, so that he will have an excuse to return it."

Gwen's eyes opened wide in surprise. "What a masterly intellect you have!" she said. "I never thought of that. He'll be more likely to give it to uncle to-night. And—I supposed he would come back to-morrow anyway."—Toronto Saturday Night.

#### Keeping Track of Your Books.

If you wish to keep a list of the books you own, says St. Nicholas, it will be found an excellent plan to buy one of the small boxes of index cards that are advertised in so many magazines. This will be found much more convenient than a blank book. By writing the name of each book on a separate card, you can jot down on the card any information concerning the book. Thus, when it is lent, write lightly in pencil the name and address of the borrower and the date. If the book contains anything to which you may wish to refer, it is an easy matter to make a note of the page on the card. If the book is given away, lost or sold, the card can be taken out of the box and filed elsewhere, or destroyed. These index cards may be classified according to subjects, in alphabetical order, or in any way you please, whereas the blank-book system is not changeable. By the cards you may always know just where every book is. The time to begin the use of any system is when one is young, and before the library grows. Your librarian will be glad to tell you the best ways of using a card system.

"Look here, sir!" exclaimed the maiden lady, "I want you to take back that parrot you sold me. I find that it swears badly!"

"Well, madam," replied the dealer, "it's a very young bird; it'll learn to swear more perfectly when it's a bit older."

Mrs. Slimdiet—Did you pound the steak well?

Servant—Yes, mum.

Mrs. Slimdiet—And steam the bread?

Servant—Yes, mum.

Mrs. Slimdiet—Well, put some cologne in the butter and call the boarders to breakfast.

#### The Fugitive.

A hunted thing, through copse and wood  
Night after night he skulked and crawled

To where amid dark homesteads stood  
One gloomy garden locked and walled.

He paused in fear each step he took,  
And waited till the moon was gone;  
Then stole in by the little brook  
That still laughed down the terraced lawn.

And up the well-known path he crept,  
And through the tangled briars tore;  
And he, while they who sought him slept,  
Saw his ancestral home once more.

There song and lights were still astir,  
And by her he could see one stand,  
(And he had fared so far to her!)  
Who spoke with her and took her hand.

Then back by copse and wood he crept  
While yet the dawn was cold and dim;  
And while in her white room she slept,  
'Twas his old hound crawled back with him.

—Arthur Stringer in July Century.

#### Girl Students Who Cook.

A girl who has to work while at college has certain advantages while at Oberlin, as Miss Alice Fallows points out in the July Century:

For the Oberlin girl who prefers to concentrate her housewifely talents on herself, Keep Home, an old fashioned rambling house owned by the college, provides rooms at 50 cents a week. With the little cook stove which is part of the furniture of every room, a frying pan and a coffee pot, she has all the paraphernalia necessary for her frugal meals. Her breakfast oatmeal simmers while she is dressing. At noon she slips a potato into the oven with one eye on her Latin grammar, and completes her mid-day meal with a dish of canned corn, perhaps, and an egg or two. Supper becomes simple or elaborate, according to her appetite and the state of her funds. Meat is sometimes included in the bill of fare, but to the girls at the Keep Home it often ceases to be a daily necessity. Some of them are farmers' daughters who come in from the surrounding country, and parental visits more or less frequently result in a supply of eggs and vegetables, or bread and cake, which the mother has made with loving thoughts of her college girl. But the student who comes from a distance and has no convenient link between herself and the home larder, can live very reasonably and wholesomely at Keep Home, if she has even a working knowledge of the chemistry of foods. One student's weekly expenses, including room rent, fuel, light and food, amounted to \$1.65, and her meals, she said, were plentiful and good. Weekly expenses, with very careful planning, can be brought down to a dollar, and occasional girls have lived on 75 cents, but not without loss of physical strength which left them in poor condition for college work. Sometimes girls get only their breakfast and supper, taking dinner in one of the boarding houses of the town, and working out the cost of it, which is ten cents or more, by washing the dishes and setting the table afterward.

Keep Home for more than forty years has been the refuge of poor students. While college life for its occupants, perhaps, has not been so full of color and enjoyment as for the girls who needed to take no anxious thought for the morrow, they have made the most of the blessings they could have, and, without exception, by their achievements in the world, have made Oberlin proud to acknowledge them as graduates.

Don't sit down and wait for  
Fortune to apply the goad,  
But get out and do your  
Share of tramping life's rough road.


Oh, blithe mosquito, you'd be blamed  
For less of mortal man's regret  
If like sea serpents you were famed,  
But never personally met.

It's an easy matter to find a way  
If a man only has the will;  
It's an easy matter to get along  
After he starts down hill.

## The Watch Word is ELGIN

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## DOMESTIC ECONOMY.

### Domestic Hints.

**GLAZED TURNIPS.**—Pare, cut in thin slices and boil in salted water ten minutes. Put one tablespoonful of butter over the fire with half a teaspoonful each of salt and sugar, one pinch of cinnamon, a dusting of pepper and one cupful of boiling water. Drain the turnips, lay in a baking dish, pour the sauce over and bake half an hour, basting often. Melt one tablespoonful of butter, stir in one tablespoonful of flour, and make a sauce with the liquor from the turnips. Pour the sauce in a serving dish, lay the turnips over the top, and serve.

**FOWL AND RICE CROQUETTES.**—The remains of cold fowl, a little white sauce, one quart of chicken stock, three ounces of butter, egg wash and bread crumbs. Chop the fowl quite small and mix with the bechamel, which should be quite thick. Boil the rice in the stock gently for half an hour, then add the butter and boil until soft and dry. When the rice has cooled to allow handling, form into balls, making a hollow in each of them, which must be filled with the minced fowl and covered with rice; then egg and crumb. Fry and serve with oyster sauce.

**FISH STEW AND POTATOES.**—Take a china baking dish which can be sent to table, and around it make a 3-inch high wall of mashed potato. Brush this over with milk, and place in a steady oven to brown. Take some cold fish—haddock, cod or hake—remove all skin and bone, and break it into flakes. Have ready two or three hard-boiled eggs and some good, thick, white sauce. Heat the sauce, season it with cayenne and salt, set the fish in it and heat all together. When the potato has browned take up the fish carefully with a spoon, and arrange it in the center of the dish; pour the white sauce over, ornament with chopped parsley and around the edge of the fish put a garnish of slices of hard-boiled egg. Place the dish in an oven so as to let all heat through, and serve.

**RABBIT PUDDING.**—Rabbit pudding is always popular, and will go farther for a family than a roasted or boiled rabbit. Skim and wash it and divide it into ten or twelve pieces. Make a gravy by stewing the head, liver and trimmings of skin, and a little lean bacon, with some herbs. Pour over sufficient water or weak stock to cover. Line a greased basin with suet crust, dip each piece of rabbit into seasoned flour, and arrange in the basin with three or four ounces of bacon, cut in strips, or one-half pound of sausage meat. Pour over a cupful of the cold broth, cover the pudding with suet crust, press the edges together and tie down the basin with a floured cloth wrung out in boiling water. Set the pudding in a saucepan of perfectly boiling water, and let it simmer steadily but slowly for three and a half hours. Serve in the basin with a napkin folded round, or turn out on to a hot dish, if preferred.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, July 10, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Dec.
Wednesday.....	66% @ 66 1/2	68 1/2 @ 68
Thursday.....	66% @ 66 1/2	68 1/2 @ 68
Friday.....	65% @ 66 1/2	67% @ 68 1/2
Saturday.....	65% @ 66 1/2	67 1/2 @ 68 1/2
Sunday.....	64% @ 64 1/2	66% @ 65 1/2
Tuesday.....	64% @ 63 3/4	66% @ 65 1/2

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	July.	Sept.
Wednesday.....	5s 6 1/2 d	5s 7 1/2 d
Thursday.....	5s 5 1/2 d	5s 6 1/2 d
Friday.....	5s 6 1/2 d	5s 6 1/2 d
Saturday.....	5s 6 d	5s 6 1/2 d
Monday.....	5s 5 d	5s 5 1/2 d
Tuesday.....	5s 4 1/2 d	5s 5 1/2 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	* @	* @
Friday.....	* @	* @
Saturday.....	* @	* @
Monday.....	99% @	1 04% @ 1 04 1/2
Tuesday.....	99% @ 99	* @
Wednesday.....	98% @ 98	* @

\* Holiday.

## WHEAT.

Lack of activity and absence of strength have continued prominent features of the wheat market during the past week. A better condition of affairs for the selling and producing interests may be experienced later on, with less pressure to realize and prospects of fair foreign demand, but the situation affords little or no encouragement to hope for the development of immediate strength. The quantity of ships here suitable for grain loading, engaged and disengaged, continues small, with freight rates still at a tolerably high range. Five ships arrived under charter for wheat the past week at rates ranging from £1 16s 3d to £1 18s 9d for Europe, usual option. The amount of ocean tonnage headed this way is on the increase, and now shows a carrying capacity of 300,000 tons, as against 275,000 tons a year ago. There will be more wheat to send afloat from this State, however, than last season. Included in this week's shipments were 560 tons wheat for Peru. The Hungarian crop is now officially estimated at 16,750,000 quarters, against 17,500,000 quarters for previous season. The crop of the central and northwest provinces of India, Bengal and Bombay, is given at 3,111,570 tons, as against 2,885,350 tons a year ago, and 3,739,030 tons two years ago. The world's shipments for the past week are reported at 5,945,000 bushels, being a decrease of 2,833,000 bushels, as compared with preceding week.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, 99 1/2 @ 98 1/2.  
May, 1902, delivery, \$1.04 1/2 @ 1.04 1/2.  
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at 98 1/2 @ 99c; May, 1902, — @ —.

California Milling, old.....\$1 00 @ 1 02 1/2  
Cal. No. 1 shipping, alongside.....95 @ 96 1/2  
Oregon Valley.....95 @ 1 00  
Washington Blue Stem.....97 1/2 @ 1 02 1/2  
Washington Club.....95 @ 97 1/2  
Of qualities wheat.....92 1/2 @ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 4 1/2 d @ 6s 5 d	5s 8 d @ 5s 9 d
Freight rates.....	40 @ —	36 1/4 @ 38 1/2
Local market.....	\$1 05 @ 1 07 1/2	95 @ 97 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

There is no extensive movement at present, either outward or on local account. Quotable values are without change, but market cannot be termed firm, sales at full current rates being confined mainly to favorite marks going to special custom. Supplies for this time of year are of very liberal proportions.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

Business in this cereal since last review has been far from brisk. There are no very heavy quantities arriving, but there

is more than enough coming forward to keep the market against the selling interest, especially of ordinary feed qualities, which have to depend mainly on local millers for purchasers. Values for desirable export grades are being tolerably well maintained at previously quoted range. That there will be a fairly active demand for shipment to Europe is altogether probable. On some of the ships now engaged the charterers have reserved the privilege of loading barley instead of wheat, or of sending mixed cargoes. In the speculative market trading was slow and fluctuations kept within narrow bounds.

Feed, No. 1 to choice.....	70 @ 72 1/2
Feed, fair to good.....	67 1/2 @ 70
Brewing, No. 1 to choice.....	75 @ 81 1/2
Chevalier, No. 1 to choice.....	— @ —
Chevalier, No. 2.....	— @ —
Chevalier, poor.....	— @ —

## OATS.

Offerings are principally new Reds and ordinary qualities of old Blacks. While market for Reds is without quotable improvement, it is showing more steadiness than for several weeks preceding. Prices for these oats are now down to a point where there is nothing to be gained by crowding stocks to market. Whites and Grays continue scarce and are hardly quotable, and there will likely be few of these on market for a month or more to come.

White Oats, fancy feed.....	1 40 @ 1 45
White, good to choice.....	1 32 1/2 @ 1 37 1/2
White, poor to fair.....	1 20 @ 1 30
Gray, common to choice.....	1 30 @ 1 35
Milling.....	1 42 1/2 @ 1 47 1/2
Surprise, good to choice.....	1 45 @ 1 50
Black Russian.....	85 @ 1 00
Red.....	95 @ 1 10

## CORN.

Large White is still going forward to Central America, this week's steamers taking about 85 tons. Spot supplies of this variety are very light. Large Yellow is offering in moderate quantity. There is very little Small Yellow, either here or at producing points. Prices throughout remain close to the figures of preceding week.

Large White, good to choice.....	1 35 @ 1 40
Large Yellow.....	1 30 @ 1 35
Small Yellow.....	1 55 @ 1 60
Eastern, in bulk (cartload lots).....	1 30 @ 1 35

## RYE.

Demand is slow and market lacks firmness. There are no heavy spot stocks, but there is considerable offering to arrive.

Good to choice, new.....	75 @ 77 1/2
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## BUCKWHEAT.

Values are somewhat unsettled. Buyers are holding off, anticipating lower prices than have been lately current.

Good to choice.....	1 50 @ 1 75
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## BEANS.

A very quiet market is experienced for beans of nearly every description, and this is apt to be the case for the next month or six weeks. In about a month new crop beans from Sacramento river section will commence to come forward, when values will doubtless change materially, so as to conform to conditions of the coming season, the supply and demand, etc. It is yet too early to determine just what prices will rule for new, but it is more than probable that there will be a marked decline from existing rates for white beans.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 50 @ 4 90
Lady Washington.....	3 75 @ 3 90
Butter.....	— @ —
Pinks.....	1 40 @ 1 60
Bayos, good to choice.....	2 30 @ 2 40
Reds.....	3 00 @ 3 25
Red Kidney.....	4 25 @ 4 50
Limas, good to choice.....	6 25 @ 6 40
Black-eye Beans.....	2 75 @ 3 25
Horse Beans.....	1 00 @ 1 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

## DRIED PEAS.

Values are very poorly defined, both offerings and demand being of insignificant proportions.

Green Peas, California.....	2 00 @ 2 50
Niles Peas.....	1 50 @ 1 75

## WOOL.

There is no lack of demand for fine wools at rates lately current on same, or at a slight advance where the transfer of especially desirable lots is in question, the market being firm at quotations for wools of this class. Stocks of fine wools in first hands are now down to small compass. Coarse and medium fleeces will probably come in for more attention at an early day, now that most of the fine wools have passed into second hands.

## SPRING.

Humboldt and Mendocino.....	14 @ 15 1/2
Humboldt and Mendocino Lambs.....	11 @ —
Northern, free.....	12 @ 13
Northern, defective.....	10 @ 11
Middle Counties, free.....	10 @ 11

Middle Counties, defective.....	9 @ 10
Southern, 12 mos.....	8 @ 9
Southern, free, 7 mos.....	7 @ 10
Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## HOPS.

Scarcely anything doing in this article at present. Stocks of old are nearly exhausted, and there is no inclination shown on the part of growers to contract for deliveries of new at the low figures named by buyers. On new to arrive it is doubtful if over 13c could be secured for choice at this date.

Good to choice 1900 crop.....	15 @ 20
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## HAY AND STRAW.

While there are fairly liberal offerings of hay, especially as compared with the immediate demand, arrivals include a rather small percentage of strictly choice. Wheat hay, and for this description the market inclines in favor of sellers. The supply of Alfalfa is also of very moderate volume. Common qualities of mixed Wheat and Oat and Volunteer Oat are offering in more than ample quantity for existing demand for same.

## NEW CROP.

Wheat, good to choice.....	8 00 @ 10 50
Wheat and Oat.....	7 50 @ 10 00
Oat.....	6 00 @ 9 00
Barley and Oat.....	6 00 @ 8 50
Alfalfa.....	7 00 @ 9 00
Clover.....	— @ —
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 12 00
Straw, 3/4 bale.....	35 @ 40

## MILLSTUFFS.

Supplies of mill offal are of much the same light proportions as for some weeks past, and values in consequence continue to be well sustained at the quoted range. Prices for Rolled Barley and Milled Corn have shown no material changes since last review.

Bran, 3/4 ton.....	17 00 @ 18 00
Middlings.....	19 50 @ 21 00
Shorts, Oregon.....	17 50 @ 18 50
Barley, Rolled.....	16 00 @ —
Cornmeal.....	27 00 @ 27 50
Cracked Corn.....	28 00 @ 28 50

## SEEDS.

Scarcely anything doing in this line at present, which is as much due to absence of noteworthy offerings as to lack of inquiry. Owing to the prevailing dullness, values are necessarily for the time being largely nominal.

	Per ctt.
Mustard, Trieste.....	— @ —
Mustard, Yellow.....	— @ —
Flax.....	2 50 @ 3 00
Alfalfa, Utah.....	— @ —
Alfalfa, California.....	— @ —

	Per lb.
Canary.....	3 1/4 @ 3 3/4
Rape.....	2 @ 2 1/2
Hemp.....	3 @ 3 1/2

## BAGS AND BAGGING.

The active demand lately experienced for Grain Bags has encouraged principal holders to further advance prices, the present asking figure for Calcuttas being 8 1/2c. It would seem no further proof was necessary than has been given this season of the utter failure of the State to regulate the price of bags in favor of the farmer, through the present scheme of turning out a few thousand prison-made bags. These prison bags have made importers more than ordinarily cautious and have thus indirectly aided in bringing about the present high prices.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	8 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	8 @ 8 1/2
State Prison Bags in lots of 2000, 3/4 100.....	— @ —
Wool Sacks, 4 lbs.....	32 1/2 @ 35
Wool Sacks, 3 1/2 lbs.....	30 @ 32 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/2
Fruit Sacks, cotton.....	6 1/2 @ 7 1/2

## HIDES, PELTS AND TALLOW.

There is a healthy tone to the hide market, demand being good at prevailing figures. Pelts are not in very active request, although current values are being fairly well maintained. Tallow is selling readily at quoted figures.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/2 @ —	9 @ —
Medium Steers, 48 to 56 lbs.....	9 1/2 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/2 @ —	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/2 @ —	8 @ —
Wet Salted Klp.....	9 1/2 @ —	8 1/2 @ —
Wet Salted Veal.....	9 1/2 @ —	8 1/2 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Klp and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	— @ —
Salted Horse Hides medium.....	2 00 @ —	— @ —

Salted Horse Hides, small.....	1 00 @ —
Dry Horse Hides, large.....	1 75 @ —
Dry Horse Hides, small.....	1 00 @ 1 25
Dry Colts' Hides.....	50 @ —
Pelts, long wool, 3/4 skin.....	75 @ 1 00
Pelts, medium, 3/4 skin.....	50 @ 75
Pelts, short wool, 3/4 skin.....	30 @ 40
Pelts, shearing, 3/4 skin.....	10 @ 25
Deer Skins, best summer.....	35 @ —
Deer Skins, good medium.....	— @ 30
Deer Skins, thin winter.....	— @ 10
Elk Hides.....	10 @ 12
Tallow, good quality.....	4 1/2 @ 4 3/4
Tallow, No. 2.....	4 @ 4 1/4
Goat Skins, perfect.....	30 @ 37 1/2
Goat Skins, damaged.....	10 @ 20
Kid Skins.....	5 @ 10

## HONEY.

The spot supply of honey continues light of all descriptions, but there is at the same time more offering than can be placed at extreme current rates. Only in a small way are those figures possible, bids of wholesale operators being at a lower range.

Extracted, White Liquid.....	5 1/2 @ 6
Extracted, Light Amber.....	4 1/2 @ 5
Extracted, Amber.....	4 @ 4 1/2
White Comb, 1 lb frames.....	11 @ 12 1/2
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7 1/2

## BEESWAX.

Market is not burdened with offerings. The few transfers effected are at prices practically the same as have been in force for some time past.

Good to choice, light, 3/4 lb.....	25 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Beef is in fair request at steady rates, the supply coming forward being just about sufficient for current needs. Mutton has been tending slightly in favor of sellers, market showing firmness, without being quotably higher. Current values on Lamb and Veal are being well maintained. The market for Hogs was without special change, arrivals continuing of very moderate volume.

Beef, first quality, dressed, net 3/4 lb.....	7 @ —
Beef, second quality.....	6 1/2 @ 7
Beef, third quality.....	6 @ —
Mutton—ewes, 6 1/2 @ 7 1/2 c; wethers.....	7 @ 8
Hogs, hard grain fed, medium.....	6 1/2 @ 6 3/4
Hogs, small, fat.....	6 1/2 @ 6 3/4
Hogs, large, hard.....	5 1/2 @ 6
Hogs, feeders.....	— @ —
Hogs, country dressed.....	7 1/2 @ 7 3/4
Veal, small, 3/4 lb.....	8 @ 9 1/2
Veal, large, 3/4 lb.....	7 @ 8
Lamb, spring, 3/4 lb.....	8 1/2 @ 9

## POULTRY.

There was a generally better tone to the poultry market, with arrivals lighter in the aggregate than for several weeks preceding and the demand slightly improved. The inquiry, however, was mainly for Chickens, choice young stock being given the preference, although large and fat Hens were salable to very fair advantage. Old Ducks and Turkeys were the poorest sellers.

Turkeys, live hens, 3/4 lb.....	9 @ 10
Turkeys, live gobblers, 3/4 lb.....	9 @ 10
Hens, California, 3/4 dozen.....	3 50 @ 5 00
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	6 00 @ 7 00
Fryers.....	4 00 @ 4 50
Broilers, large.....	3 50 @ 4 00
Broilers, small.....	2 50 @ 3 00
Ducks, old, 3/4 dozen.....	2 50 @ 3 00
Ducks, young, 3/4 dozen.....	3 50 @ 4 00
Geese, 3/4 pair.....	1 12 1/2 @ 1 25
Goslings, 3/4 pair.....	1 12 1/2 @ 1 37 1/2
Pigeons, old, 3/4 dozen.....	1 50 @ 1 75
Pigeons, young.....	1 50 @ 1 75

## BUTTER.

Market is firm and higher for choice to select butter, both creamery and dairy product. Government requisitions have taken considerable choice butter off the market and helped stiffen values. Fair to medium grades continue to be offered at comparatively easy figures.

Creamery, extras, 3/4 lb.....	18 1/2 @ 19
Creamery, firsts.....	17 1/2 @ 18
Creamery, seconds.....	— @ —
Dairy, select.....	17 1/2 @ 18
Dairy, firsts.....	17 @ 17 1/2
Dairy, seconds.....	15 @ 16
Dairy, soft and weedy.....	— @ —
Mixed store.....	13 @ 13 1/2
Creamery in tubs.....	17 @ 19
Pickled Roll.....	— @ —
Firkin, California, choice to select.....	16 1/2 @ 17 1/2
Firkin, common to fair.....	14 @ 15

## CHEESE.

Not much cheese now coming forward, either regular flats or small sizes, and market is inclining in favor of the producing interest, being firm at current rates.

California, fancy flat, new.....	9 @ 9 1/2
California, good to choice.....	8 1/2 @ 9
California, fair to good.....	8 @ 8 1/2
California Cheddar.....	— @ —
California, "Young Americas".....	9 1/2 @ 10 1/2

## EGGS.

For most select fresh, uniformly large and white, and in every way desirable, the market tended in favor of sellers, without any very pronounced advance being established. With above exception, the market showed no improvement, ordinary qualities being in liberal supply.



Eastern eggs were offered at 13½@15c., the inside figure hardly covering cost.

California, select, large, white and fresh. 18 @19  
California, select, irregular color & size. 16 @17  
California, good to choice store. 13 @15  
Eastern, good to choice. 14 @16

#### VEGETABLES.

Most kinds of summer vegetables were in very fair supply. Changes in quotable values were not very numerous or very pronounced, but such as were effected were in the main to lower levels. Yellow Onions were offered at slightly easier figures than preceding week. Tomatoes were in increased supply and lower. Peppers were in more liberal receipt and were offered at reduced rates. String and Wax Beans were more plentiful and market was easier than last quoted.

Asparagus, ½ box.....	— @ —
Beans, String, ½ lb.....	1½ @ 3
Beans, Wax, ½ lb.....	2 @ 3
Cabbage, choice garden, ½ 100 lbs...	50 @ 60
Cauliflower, ½ dozen.....	50 @ —
Corn, Green, ½ sack.....	35 @ 1 00
Corn, Green, Alameda, ½ large crate. 1 00	@ 1 25
Cucumbers, ½ small box.....	50 @ 60
Cucumbers, Bay, ½ large box.....	1 00 @ 1 25
Egg Plant, ½ lb.....	5 @ 7
Garlic, ½ lb.....	2½ @ 3
Onions, Yellow Danver, ½ cental.....	75 @ 90
Onions, New Cal. Red, ½ cental.....	45 @ 60
Peas, Sweet garden, ½ lb.....	2 @ 2½
Peas, good to choice, ½ sack.....	75 @ 1 00
Peppers, Green Chile, ½ sack.....	75 @ 1 25
Peppers, Bell, ½ lb.....	3 @ 5
Rhubarb, ½ box.....	— @ —
Rhubarb, Mammoth, ½ box.....	— @ —
Squash Summer, ½ small box.....	25 @ 40
Summer Squash, Bay, ½ large box.....	40 @ 75
Tomatoes, River, ½ large box.....	1 00 @ 1 25
Tomatoes, ½ small box.....	20 @ 35

#### POTATOES.

Receipts of new potatoes showed considerable decrease, as compared with previous week, and prices averaged higher, although for other than choice to select the market could not be termed firm. Best qualities are arriving mainly in boxes, which will continue to be the case for several weeks to come. Old of desirable quality are selling in a small way at \$1.75@2.00 per cental, but are too scarce to justify regular quotations.

Burbanks, Petaluma-Tomales, ½ ctl.	— @ —
Burbanks, Oregon, ½ cental.....	— @ —
River Burbanks, in boxes, ½ cental. 1 00	@ 1 75
Early Rose, ½ cental.....	1 00 @ 1 35
Mission Garnet Chile, in sacks. ....	90 @ 1 40

#### The Fruit Market.

#### FRESH FRUITS.

The market was not so heavily glutted with common qualities of fruits as for some weeks preceding, and in consequence presented a better tone, although the demand was mainly for choice. Common and defective qualities failed to command materially better figures than had been ruling. For fairly good Gravenstein Apples \$1.25 per box was asked. A few Huckleberries were received and brought 20c per pound, but no large quantities could have been placed at this figure or anything near thereto. Apricots in bulk were not in heavy receipt, but wholesale values were no higher than preceding week. Only for most select qualities was \$30 per ton obtainable, most of the business being within range of \$20@25 per ton for good to choice. Apricot pits are bringing \$12 per ton. Fine Pears met with a firm market. Grapes were in increased receipt, a few Black putting in an appearance, and for such as were ripe and otherwise desirable good prices were obtainable. Cantaloupes are now arriving from several localities South and North, but the aggregate of offerings is not particularly heavy. Currants were in light receipt but no higher. There were no excessive supplies of choice Berries of any description.

Apples, Red Astrachan, ½ 50-lb. box.	40 @ 1 00
Apples, green, ½ small box.....	15 @ 30
Apricots, Royal, ½ box.....	35 @ 60
Apricots, good to choice, ½ ton.....	20 00 @ 30 00
Blackberries, ½ chest.....	3 00 @ 4 50
Cantaloupes, ½ crate, \$1.50@2; crate. 3 00	@ 3 50
Cherries, Black, ½ box.....	75 @ 1 00
Cherries, Royal Anne, ½ box.....	75 @ 1 00
Crabapples, ½ box.....	50 @ 65
Currants, ½ chest.....	2 50 @ 4 50
Figs, 1-layer box, 40@60c; 2-layer....	65 @ 1 00
Gooseberries, common, ½ lb.....	— @ —
Grapes, Arizona, Seedless, ½ crate.....	1 00 @ 1 25
Grapes, Vacaville, ½ box.....	75 @ 1 25
Logan Berries, in baskets, ½ chest..	4 00 @ 5 00
Nectarines, Red, ½ box.....	75 @ 1 00
Nectarines, White, ½ box.....	50 @ 65
Nutmeg Melons, Indio, ½ crate.....	2 50 @ 3 00
Peaches, ½ box.....	25 @ 50
Pears, Dearborn Seedling, ½ small box	40 @ 60
Pears, River Bartlett's, ½ 40-lb. box..	1 00 @ 1 30
Plums, ½ box.....	20 @ 40
Prunes, ½ box.....	40 @ 60
Raspberries, ½ chest.....	5 00 @ 6 00
Strawberries, Longworth, ½ chest..	3 50 @ 6 00
Strawberries, Large, ½ chest.....	3 00 @ 5 00
Watermelons, Arizona, ½ doz.....	— @ —

#### DRIED FRUITS.

Aside from a moderate movement in new Apricots, there is not much business to record in cured or evaporated fruits of

any description. There will be little deciduous fruit, other than Prunes, carried into the new season, contrary to predictions made some months ago by many connected with the trade. Stocks of Peaches, Pears and Plums are light, and in present offerings there is a total absence of high grade fruit. Apples are in very moderate supply. Figs are practically out of stock, and values for new crop remain so far wholly undetermined. In the absence of noteworthy offerings of dried fruit of any sort, and the very light trading, values for the time being are not clearly defined, and quotations in most instances must be regarded as being temporarily largely nominal. Prunes of last crop are being offered at 2½c. for the 4 sizes, which is certainly low enough, considering the reduced yield the current season. There are some going forward to Germany. A fairly liberal output of new Peaches is expected, and in a speculative way 5@5½c. is mentioned for choice in sacks at primary points, July shipment. New Apricots are being held, as a rule, above the views of large buyers. The quality of this fruit this season is above the average, and there should be a good demand at good prices. It is altogether probable that Eastern and foreign buyers will be eager to purchase, once they have had an opportunity of inspecting samples. Packers are now bidding 7½c. for choice 'Cots in the sweat boxes, and are offering to turn the same out in sacks, ready for shipment, at a cent advance. Numerous growers are holding, however, for materially higher figures.

#### EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6½ @ 6½
Apricots, Royal, choice, in sacks, ½ lb..	7½ @ 8
Apricots, Moorpark.....	9 @ 11
Apples, in 50-lb boxes, rings, pressed, fancy.....	5½ @ —
Apples, 50-lb boxes, rings, pressed, good to choice.....	3½ @ 4½
Figs, White, fancy pressed.....	— @ —
Nectarines, ½ lb.....	4 @ 6
Peaches, unpeeled, fancy.....	5½ @ 5½
Peaches, unpeeled, choice.....	3½ @ 4
Peaches, peeled, in boxes.....	11 @ 13
Pears, unpeeled Bartlett's, halved, fancy. 5½	@ 6½
Pears, halved, unpeeled Bartlett's.....	3½ @ 4½
Pears, quartered, unpeeled Bartlett's....	3½ @ 4½
Plums, Black, plitted.....	3½ @ 4½
Plums, White and Red.....	4½ @ 5½
Prunes, Silver.....	4½ @ 6

#### COMMON SUN-DRIED.

Apricots, sliced.....	5½ @ 6½
Apples, sliced.....	2 @ 2½
Apples, quartered.....	2 @ 3
Figs, Black.....	— @ —
Figs, White.....	— @ —
Peaches, unpeeled.....	2 @ 3
Pears, prime halves.....	2½ @ 3½

Prices for 1900 crop Prunes, as named by the California Cured Fruit Association: District No. 3, four sizes, 3c. per lb.; 40-50s, 4½c.; 60-70s, 3½c.; 70-80s, 3¼c.; 80-90s, 2¾c.; 90-100s, 2¼c.; 100-120s, 1¾c.; 120 up, 1¼c. The selling price of Prunes for District No. 1 is ½c. per pound less, and for District No. 2 ¼c. per pound less than for District No. 3.

#### RAISINS.

Very few Raisins are moving outward at present in any direction, and the quantity changing hands on local account is of light volume. That there will be any very brisk movement during the balance of the season is not probable. In official card rates of the Growers' Association there are no changes reported.

#### F. O. B., CARLOAD LOTS.

Imperial Clusters, 6-crown, ½ 20-lb box.....	3 00 @ —
Dehesa Clusters, 5-crown.....	2 50 @ —
Fancy Clusters, 4-crown.....	2 00 @ —
London Layers, 3-crown, ½ box.....	1 60 @ —
do do 2-crown, ½ box.....	1 50 @ —

(Usual advance for fractions.)

Loose Muscatel, 4-crown standard, ½ lb.....	— @ 7
Loose Muscatel, 3-crown.....	— @ 6½
Loose Muscatel, 2-crown standard..	— @ 6
Loose Muscatel, seedless.....	— @ 6½

(Above prices for loose raisins are for 50-lb boxes.)

Seeded Raisins, 1-lb packages, ½ lb. 5½c.—  
Loose Muscatel Pacifics, 5½c., 5¼c. and 5c. for 4, 3 and 2 crown respectively.

Thompson Seedless.—Bleached fancy, ½ lb., —0; choice, 9c; standard, —c; prime, —c. Unbleached 7½@9c.

Sultanas.—Bleached fancy, ½ lb., —c; choice, 8½c; standard, —c; prime, —c. Unbleached, 7c.

#### CITRUS FRUITS.

Oranges are offering in moderate quantity at generally easy rates, but meet with slow sale, the quality, as is to be expected at this date, being in the main quite ordinary. Lemons were in fair request at generally unchanged values, with market moderately firm for best qualities. Limes were in limited stock and last quoted advance continued to be maintained.

Oranges—Navel, ½ box.....	75 @ 2 00
Seedlings, ½ box.....	50 @ 1 25
Valencias, ½ box.....	1 00 @ 2 50
Grape Fruit, ½ box.....	75 @ 1 50
Lemons—California, select, ½ box.....	2 25 @ 2 50
California, good to choice.....	1 75 @ 2 00
California, common to fair.....	1 00 @ 1 50
Limes—Mexican, ½ box.....	6 00 @ 7 00

#### NUTS.

Market is quiet for Almonds at pre-

viously quoted rates, with few offering, either of last crop or new to arrive. Walnuts are not quotable, market being bare of supplies. Peanuts are ruling fairly steady, with stocks of very moderate volume.

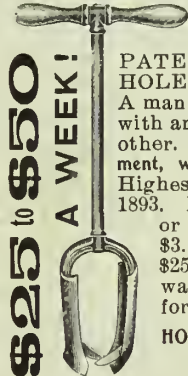
California Almonds, shelled.....	18 @ 22
California Almonds, paper shell, ½ lb.....	12 @ 14
California Almonds, soft shell.....	10 @ 12
California Almonds, hard shell.....	6 @ 7
Peanuts, California, fair to prime.....	4½ @ 5½
Peanuts, Eastern, hand-picked.....	5½ @ 6
Pine Nuts.....	5 @ 6

#### WINE.

The market remains virtually as previously noted, with no likelihood of any special changes being developed for several months to come. Business in a wholesale way must continue to be of insignificant proportions until the new season's product comes upon the market, owing to the almost entire absence at present of offerings from the hands of growers. Values for dry wines of last season's vintage remain nominally quotable at 22@25c. per gallon, as to quality and other conditions. Fairly liberal quantities of blended wines are moving outward from wholesalers and jobbers.

#### California Dried Fruit at New York.

NEW YORK, July 10.—Evaporated apples, common, 3½@4c; prime wire tray, 5½@5½c; choice, 6@6½c; fancy, 6½@7c.  
California Dried Fruits.—Market quiet, with values fairly steady.  
Prunes, 2½@6½c.  
Apricots, Royal, 8@12½c; Moorpark, 9½@14c.  
Peaches, unpeeled, 7@10c; peeled, 11@14c.



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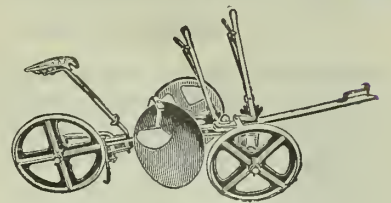
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## THE DAIRY.

### Sorghum Growing.

Sorghum has proved so valuable in California and is so largely grown in interior situations for summer forage for nearly all kinds of stock, that discussion of methods is of wide interest. We find in the writings of Prof. Thomas Shaw of Minnesota for the American Sheep Breeder a very good sketch in this line. He writes primarily with reference to sheep, but the conclusions are applicable to a much wider range.

Sorghum has been grown for cattle and pastured down more or less for many years, and for several years the danger from pasturing it thus has been fully known. But not until 1895 was this writer able to obtain any information with reference to its value as a pasture for sheep, and such information was first obtained through growing it for that purpose at the Minnesota University Experiment Station. Since that time we have grown it more or less every year at our station to provide grazing for sheep, and have settled on the conviction that in providing such grazing in midsummer, it has an important mission, more especially in areas that are more or less prone to suffer from an insufficiency of moisture.

**SOILS.**—Sorghum is adapted to the same soils as are suitable for growing corn, but with the difference, probably, that sorghum is rather more at home on soils more sandy in texture than those found most highly adapted to the growing of corn. This means, therefore, that sorghum may be grown in fine form over the entire area of the corn belt. [In California it thrives in many places where heat and drouth renders corn unprofitable.—ED.] It may also be grown as sheep pasture anywhere that fodder corn may be advanced sufficiently to make fodder for winter feeding. This means that it may be grown for such a use over the entire arable area of the United States and Canada. But west of the Cascade mountains and north from California it will not grow with marked vigor, owing to the low average temperature of the summer season. And of course it will prove much more valuable in the southern and southwestern States than in the western States, because of the longer period for growth in the former, and also because of the less high adaptation in these for the production of grass pastures.

**PLACE IN ROTATION.**—As sorghum grows again and again when eaten down, it ought to have the entire portion of the season in which to grow, that is, free from frost. In several of the States along the Canada boundary this period will not cover more than ninety days. Away south it will cover more than half the year. This means, therefore, that sorghum grown as pasture can only follow with best advantage such crops as winter rye, grazed down early, or crimson clover, or other crops removed quite early from the ground.

Usually it may with much advantage be given the ground for the entire season, since that portion of it between the dawn of spring and the planting of the sorghum may with much advantage be devoted to the proper preparation of the seed. On land that is sufficiently fertile sorghum may follow any crop of the previous year, but better results will be obtained from growing it on land that is not too foul.

**PREPARING THE LAND.**—In growing sorghum for pasture it is important that it shall be sown on a soil fine, firm, moist and reasonably clean near the surface, since the plants are small and delicate at the first, and since they grow slowly for a time. Weeds are much prone to get ahead of the sorghum and consequently to hinder its growth. Particularly is this true of summer grass, that is to say, foxtail, when grown on the rich soils of the prairie. Because of this when sorghum is the sole crop grown, the ground ought to be plowed in the fall or early spring, and stirred occasionally on or near the surface until the seed is planted. In this way the seed bed is usually in fine condition as to tilth when the seed is sown. When the sorghum follows another crop, as for instance rye pastured off, there is not much time in which foul land may be cleaned on the surface. It would be better, however, as a rule, to delay the sowing of the seed until something had been done by way of sprouting the weed seeds in the surface soil.

**SOWING THE SEED.**—Sorghum seed ought not to be sown until after the usual season for corn planting. If sown earlier the germination will be slow, and if nipped with frost the subsequent growth is likely to be less vigorous than it would otherwise be. Of course sorghum may be sown later, but when the sowing is thus deferred the period of growth is proportionately shortened. The seed may be broadcasted and covered with the harrow, but it is better for several reasons to sow it with the grain drill. When thus sown, unless in dry areas, all the drill tubes should be in use. In prairie soils soft and loose, the seed ought to go down 2 or 3 inches, and in firmer soils it should not be so deeply buried. The varieties to plant are such as have been found best adapted to each locality when the sorghum has been grown to make syrup. The Minnesota Amber is probably the best adapted to northern conditions. Not less than

one bushel of seed should be sown per acre. As soon as the first points of the young sorghum plants appear a light harrow should be run over the land, with the teeth much aslant, backwards, to destroy young weeds, and in some instances it may be a good plan to harrow the crop with a heavier harrow when several inches high.

**PASTURING.**—The sorghum plant is easily pulled up when young. It should not, therefore, be grazed too early. It would not be easy to determine the best time for grazing down the sorghum. Much depends upon the amount to be grazed and the number of the sheep to be used in grazing. Ordinarily it ought not to be allowed to get so high that it will be much broken down by the sheep while feeding upon it. They are not so fond of sorghum as of good fresh grass, nor do they relish it as they do rape, but in a time when pastures are dry and scarce, sorghum pastures will be greedily devoured. If the sheep could be grazed on the sorghum, say in the forenoon, and on grass or other suitable grazing in the afternoon, the results would doubtless prove more satisfactory on the whole than if the grazing were confined to sorghum only. The amount of grazing from sorghum is relatively very large.

During all our experience in grazing sorghum at the Minnesota Experiment Station we have experienced no trouble from bloat or in any other way. The sheep have been in uniformly good health while feeding upon it. It has been grazed by them in various stages of advancement. They have fed upon it after it has been smitten with frost, but they do not relish it when thus injured. While this crop may not be much required in the northern States, in other States it will render great service, and even in the northern States one piece of sorghum for late summer grazing will usually be found a welcome addition to the other grazing crops grown. If the pasture is not wanted for grazing after it has been grown it will be found greatly helpful as a soiling or fodder crop, if fed when near maturity or subsequent to that time, and after partial grazing the residue when buried will be greatly helpful in increasing the power of the land to hold moisture.

## THE STOCK YARD.

### Hereford Weights.

There has been an impression on the part of some people in the past that Herefords lacked size, and that their usefulness would be increased when this requirement was met. It has always been contended by the friends of the Hereford that while size was a most desirable feature quality should not be sacrificed for its sake. In the early part of 1800 the Hereford breed was noted for the size of the oxen it produced. These were what the demand of that period required, and the Hereford supplied that demand as successfully as they do the changed requirements of to-day.

But the time came when the early days of the big ox could not be used profitably as a beast of burden or draught, and the requisite quality for a purely beef animal was sought. The Hereford female had never approximated the size of the oxen, and it was through her that the breeders worked for the production of a steer that would have the early maturing qualities desired. The value of a beef animal must, however, depend on the butcher's block, and the representative Hereford of to-day can lay positive claim to the successful combination of size and quality that was reached only through years of careful selection and breeding.

In this respect, however, the Hereford's appearance is deceiving, for on its short legs it does not appear to have the pounds of its Shorthorn brother of the same age. An interesting incident illustrating this was the comparisons made by the interested spectators at the joint Hereford-Shorthorn show at Kansas City last fall, where Herefords and Shorthorns of the same ages were shown in adjoining rings. The general opinion of all but the most experienced observers was that the Herefords had the quality and uniformity, but that they suffered in the comparison of size. Some trouble was taken to secure the official weights of all the exhibition cattle of both breeds, and the average weights of the animals in the various classes is herewith given. The cattle were weighed on October 1, 1900, but the classification by ages is figured from the base date of August 10, 1900:

	Hereford.	Short-horn.	Difference—Hereford.	Short-horn.
<b>Males—</b>				
Over 3 years....	2201	2285	84	
Two years.....	1943	1885	58	
Yearlings.....	1537	1381	156	
Senior calves....	929	926	3	
Junior calves....	705	648	57	
<b>Females—</b>				
Over 3 years....	1735	1602	133	
Two years.....	1537	1401	136	
Senior yearlings..	1140	1234	94	
Junior yearlings..	1128	1022	106	
Senior calves....	780	787	7	
Junior calves....	583	542	41	

Without doubt the scale of the Hereford has been increased by the American breeders during the past

two decades, and it has been accomplished without the sacrifice of the early maturing quality acquired by so many years of careful breeding, but which was absent in the huge specimens of the breed in the early part of the nineteenth century. The range demands scale and substance in their herd bulls, and the Hereford undoubtedly has these qualities in addition to the constitution and rustling ability that has won for them such high favor in recent years.

## TRACK AND FARM.

### Teaching a Saddle the Fox Trot.

A Wisconsin man writes to the Breeders' Gazette: "I have purchased an eight-year-old gelding in Tennessee and had him shipped north. He goes these gaits—running walk, trot, canter and rack. I want him to go a fox trot if possible, but we have no trainer of any kind here so far north. I have read many descriptions in your journal how to break a horse to rack, go the running walk, canter and high school gaits, but the only description you ever gave of a fox trot was that it was a loose jog. My horse's trot is a low one, devoid of much action; his running walk is easy, canter also and his rack is full of vigor, while he does it very easily, slow or swift. On the road he has a tendency to leave the rack and go a three-legged canter, a kind of trot in front, run behind. It is fairly easy. Will you be kind enough to devote one or two columns to explain the fox-trot and manner in which one could try to break a horse to it?"

Talmadge replies as follows: Your subscriber is in possession of a horse that will at command change his gaits, taking in all, counting the flat-footed walk, five. In an average horse for ordinary purposes this would be a sufficiency, and inasmuch as your subscriber states that two of these gaits are somewhat mixed, I would suggest that he first pay attention to improving the gaits that the horse already has. I would begin first on the trot. A low acting trotter such as your subscriber describes his horse to be is not a very safe one for a rider. By proper shoeing and biting the horse's trot no doubt can be improved. Each gait should be distinct and any mixture not tolerated. As the horse racks vigorously, unless he is naturally stiff-kneed in the trot, there is reason to believe that the trot can be improved. His work on the horse should commence at once, riding him with his mind upon the work, in such a way as to impress the horse with the meaning of the rider. In many instances I have discovered that the horse studies the rider more than the rider studies the horse, and this is done for the purpose of easing himself. The horse should be given a command to go a certain gait and the rider should compel the horse to obey that command. My belief is that any horse that can show five distinct gaits and takes them willingly and promptly is a saddle horse. The distinction between a running walk and fox trot is somewhat vague. It may be that the subscriber's horse takes a fox trot gait. Any horse that racks will also fox trot, yet only a few out of many can show a clear running walk.

Horses are not taught the slow gaits of late as they were years ago. I am told that in Kentucky forty years ago they had at the county fairs premiums for the fastest walking horses. But little attention is paid to it now. Saddle-bred horses have a natural slow gait. This gait is used almost altogether in hilly countries. They take it when forced from a flat foot and learn it more quickly when with another slow-gaited horse in the endeavor to keep up but not go ahead. There is little difference between a forced walk and a fox trot. It is to be regretted that the plain walk and the running walk do not receive more attention.

I am of the opinion that the slow gaits are lost sight of by a desire to commence at what is known as the "high school steps." This tendency should be stopped. The horse should be put through the useful gaits first. These should be brought to the highest state of cultivation possible. The best time to teach the fox trot is when first riding the colt. After the first mile or two on the road in a flat foot, a saddle-bred colt when his head is turned toward home will push ahead; this is first observed by the rider in the way he takes hold of the bit, as if asking for greater speed, and the rider has the opportunity to respond to the desire of the horse—the best way of all to gain the end. The temper of the horse, in a rider's efforts to bring out the slow gaits, should never be ruffled. Quiet and silence should be the watchwords, and I am of the opinion that almost any quick stepping, warm blooded horse, if handled for it, will fall into the fox trot with little teaching. If urging is necessary on the part of the rider let him give it, first on a slight down grade, and after repeated slow ups if the trot is taken, the horse will understand that he is expected to go a little faster than a walk but not as fast as a trot. This gait means to a traveler in a day's journey fully an hour on the road saved. It has been described by a foreigner the first time he saw it thus: "There is a walking horse that gets a hustle on himself."



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CHICAGO. NEW YORK.103-105 MISSION STREET,  
SAN FRANCISCO, CAL.**THE FIELD.****One Day With a Threshing Machine.**

To THE EDITOR:—Having heard much of the horrors of life with a threshing machine, I determined to give it a day's trial and thus satisfy myself as to the facts of the situation and give the details to your readers, if you see fit to publish them. Providing myself with overalls, jumper, straw hat, heavy boots and a set of blankets, I engaged with a machine owner to work for \$1.50 per day and board (?), that being the going wages for a "pitcher" or "loader," for the first named of which I engaged. Repairing to the "scene of action," where I arrived about sundown, I found the machine in full operation, stationed in a field of some 100 acres of bound barley. The crew consisted of an engineer, one fireman, two sack sewers, one "bearer off," two "hoedowns," one "monkey tender," one separator tender, one water man, one "roust-about," five pitchers, seven loaders and one cook and one extra man—in all twenty-five hands. At 8 o'clock sharp the whistle tooted and in an instant the hissing of steam and the hum of machinery stopped, and all was silent save the conversation of the men while caring for the stock and preparing themselves for the evening meal.

The cook house, which serves for both dining room and kitchen, may be described as a large box on wheels, in size about 10x24 feet, with a seating capacity for about fifteen men, thus rendering it necessary for part of the crew to await their turn at the tables at each meal time. The furniture of the cook house consists of little stationary tables arranged upon each side of a central alley. Each table will accommodate four persons—by a little crowding. The seats are simply storage chests, used for kitchen utensils and provisions. One of these chests is placed between every two tables and will seat four persons, with their backs to each other.

Dishes, cups and everything used in the cook house is of tin or iron, as any kind of crockeryware would break in the frequent, rapid moves over rough ground. Supper being over, the men sought their beds, which consist generally of spreading out a little straw, placing your blankets thereon and "turning in"—many of them, I noticed, "boots and all." About 10 o'clock the murmur of voices ceased and tired humanity finds a sweet repose beneath the twinkling stars, fanned by the cooling breezes of the summer night.

How quickly the night passed! It did seem to me as though I had scarcely closed my eyes when the whistle sounded 4 o'clock. Everybody was out of bed like a flash and prepared at once to roll up their bedding and tie it in neat bundles, ready for a move—for there will be a move soon and everything must be in readiness for that event, as a threshing machine waits for no man. I rose quickly and looked about me, trying my best, meantime, to get the sleep out of my eyes. I saw the engineer and fireman at their posts, with full steam up. I noticed, also, the horses all harnessed and eating away voraciously—all ready to start in a moment.

It is now 4:30 by my watch. There is the clank, clank of a bell—out of tune—and a wild rush for the cook house. There is something sickening about that rush. I remain in the background until the first installment has finished, and then someone urges me forward and I enter with many misgivings. What confronted me there I will pass over for the present, as I do not care to describe it, but will simply say that I retired immediately and after

partaking of a cup of very excellent water I was handed a fork and assigned to a position in the field among the bound sheaves to "wait for the wagon," which wagon, with loader in charge, arrived in a minute, on the trot, and I was quickly occupied in "pitching."

Now everything is in motion. The incessant moan of the machine and the hissing of steam are about the only sounds heard, but the many wagons, each drawn by a pair of powerful horses, may be seen rushing in haste to various parts of the field for more sheaves. All is hurry, hurry, hurry.

The sun pours down a relentless heat. Not a breath of air stirs. The perspiration pours from man and beast as they work together with unceasing energy to keep the maw of that insatiable machine supplied. Now and then some poor fellow, overcome by the great heat, throws down his fork, declaring he can stand no more, crawls to the poor shade of some friendly fence, then stretches himself at full length, hoping thus to recuperate his exhausted strength so he may "go at it again" and earn his \$1.50.

It does seem we have been at it an age, when suddenly toot, toot comes from the engine whistle, and everybody drops lines and tools and goes on a run to the spot whence that sound proceeds. It is 9 o'clock lunch.

I followed the crowd—glad of the respite, at least—and found hot coffee dealt out freely in tin cups, bread and butter, with cold meat. Into the latter everybody grabbed with dirty hands. Oh! it was most uninviting, most sickening, but there is a time when hunger wields the scepter and the most delicate susceptibilities must be subservient.

So I really partly relished that which would seem to be capable of turning the stomach of an ostrich. Ten minutes allowed for lunch, and all hands rush back to their respective positions, to resume the toils of harvest time. Twelve o'clock noon the shrill whistle cries, and the rush is repeated, but not quite so lively this time, as many of the men are so fatigued and limp that they cannot hasten, but slowly drag themselves to their midday meal, they having been eight hours at hard work.

"Thirty minutes to dinner and back to your posts." That monstrous machine that whips out the golden grain that feeds the millions, and at the same time wears out the lives of those who operate it, announces the close of the day's labor at 8 o'clock P. M. sharp, making just sixteen hours of body-destroying work for \$1.50 and board (?).

You who sit down to your nice hot rolls or beautiful light bread or nicely raised cakes may not know the cost—may not know the suffering endured to place those delights upon your table, but if you really wish to know by what means they come there, hire out for one day as a "pitcher" to a threshing machine, as I did. A. KAMP.

Mountain View.



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## THE APIARY.

### Bee Keepers' Meeting.

The California Bee Keepers' Association held its semi-annual meeting at Selma, Fresno county, July 1, at the office of the Rochdale store.

The executive committee reported that selling their honey last year by the carload they realized about 1 cent per pound more than they could have obtained if they had sold in small quantities.

The committee also reported that they had purchased 2600 cans to fill up the cases that were left over from last year and sold the cases at 62 1/2 cents to the members. Many were not supplied and the members think they will need another carload.

A letter was read inquiring with regard to the probable quantity of honey that could be furnished for the Eastern market. The association sold seven carloads last year and the present prospect is that the yield this year will be greater. One carload of white sage honey was reported as now ready for the market.

Dr. Johnson, president of the association, stated that he had been making 100 hives of redwood, and that they cost him, frames and all, 22 cents each.

A committee of three was appointed to arrange for storing honey and borrowing money on the same.

The meeting adjourned to meet again at 2 o'clock on the first Monday in August.

### Pear Blight and Bees.

The fruit growers appeared before the Kings county Board of Supervisors Monday, says the Hanford Journal, and submitted resolutions asking their aid in investigating the cause of pear blight. The committee requested the Board of Supervisors to make a definite statement as to whether they would take steps to have the bees removed from the fruit district or not.

The Supervisors stated that they would have to consult the District Attorney to see if they had the power to move the bees, and after consulting that official they advised the fruit growers to accept the proposition of moving the bees from the district during the blooming season.

**BEE KEEPERS AGREE TO MOVE AWAY IN BLOOMING TIME.**—The Central California Beekeepers' Association has adopted resolutions as follows:

WHEREAS, the bee men of Kings county are anxious to use every reason-

able means to demonstrate the true cause of the spread of the pear blight and to place the blame where it is due; be it

Resolved, that we, as members of the Central California Bee Keepers' Association, recommend that our members and all others engaged in keeping bees, move said bees at least — miles from orchards of pears having — trees in extent, when so requested by the orchardists, during the pear blooming season, which season will be determined by a committee of bee men working jointly with a committee of pear growers; and be it further

Resolved, that this experiment be allowed to cover such period of said seasons as will be agreed upon by aforesaid committee.

The blank spaces in the resolutions are in the original resolutions, as there are yet several questions to be settled in conference, to wit:

Will it be necessary to move the bees 5 miles from the nearest pear orchard of any size, or will a few pear trees be called an orchard of pear trees?

As pear trees blossom more or less from early spring till later in the fall, what can properly be called the season of bloom?

## Breeders' Directory.

### HORSES AND CATTLE.

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for spring pigs. We have shipped a few and have orders entered for others to be shipped when old enough. We sold two of the three hogs advertised the past few weeks and now offer the remaining Poland-China sow farrowed June 25 1900, sired by Missouri's Best U. S. 46355 and out of Happy Queen 13192 sired by the great \$400.00 boar Happy Union 41111. Write us for particulars.

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THE POULTRY YARD.

Preservation of Eggs in Germany.

Consul-General Guenther of Frankfurt, June 4, 1901, sends the following extracts from an article on the results of experiments in preserving eggs, which appeared in a recent issue of a technical journal:

Four hundred fresh hen eggs were subjected to the action of different substances for a period of eight months. At the expiration of that time it was found that the eggs which had been put into salt brine were all spoiled; that those which had been wrapped in paper were 80% bad; and that a like percentage of those which had been immersed in a mixture of glycerine and salicylic acid were unfit for use. Of the eggs which had been rubbed with salt, or imbedded in bran, or coated with paraffine, 70% were spoiled; of those subjected to a coat of liquid glass, colodion or varnish, 40%; and of those which had been placed in wood ashes or had been painted with a mixture of liquid glass and boracic acid, or a solution of permanganate of potash, only 20% were bad. Almost all the eggs that had been coated with vaseline, or had been placed in limewater, or in a solution of liquid glass, were in good condition.



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- 676,932.—FRUIT JAR—Ann E. Bray, Los Gatos Cal.
- 677,067.—WAGON JACK—D. F. De Lape, Pasadena, Cal.
- 677,091.—SYRINGE—H. & H. E. Law, S. F.
- 677,356.—LOOSE LEAF LEDGER—E. L. McIure, S.F.
- 676,937.—PREPARING FOOD—J. Meyenberg, Buena-park, Cal.
- 677,086.—LOOMS—J. H. Northrop, Tustin, Cal.
- 677,037.—LOOMS—J. H. Northrop Tustin, Cal.
- 677,036.—LOOMS—J. H. Northrop, Tustin, Cal.
- 676,994.—PORTABLE WINDLASS—M. O'Keefe, Vallejo, Cal.
- 677,140.—DISK HARROW—O. T. Evans, Altamont, Cal.
- 677,101.—PROPELLER—H. V. B. Parker, S. F.
- 677,103.—PUMP—J. Richards, S. F.
- 676,996.—PRESERVING MILK—A. V. Russell, S. F.
- 677,105.—SCISSORS SHARPENER—J. S. Shaffer, Sonoma, Cal.
- 677,001.—ROTARY ENGINE—A. T. Stimson, Eureka, Cal.
- 677,107.—CLOTH CUTTER—H. E. Thomas, S. F.
- 677,146.—PORTABLE FORGE—W. C. Thurman, Sanger, Cal.
- 677,291.—STEAM GENERATOR—S. M. Trapp, Seattle, Wash.
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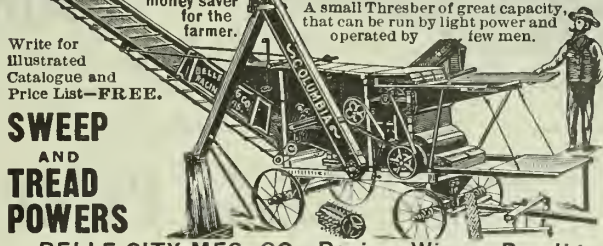
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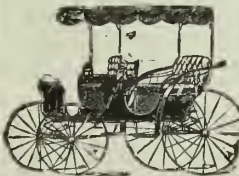
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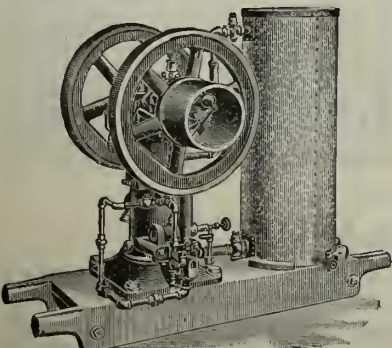
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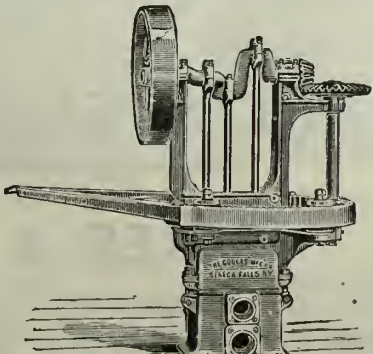
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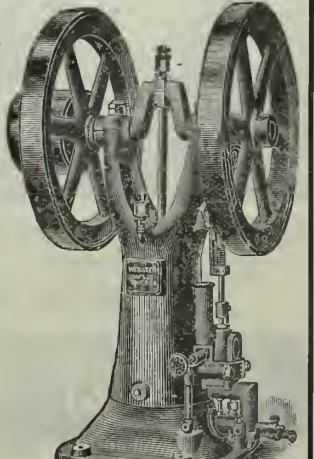
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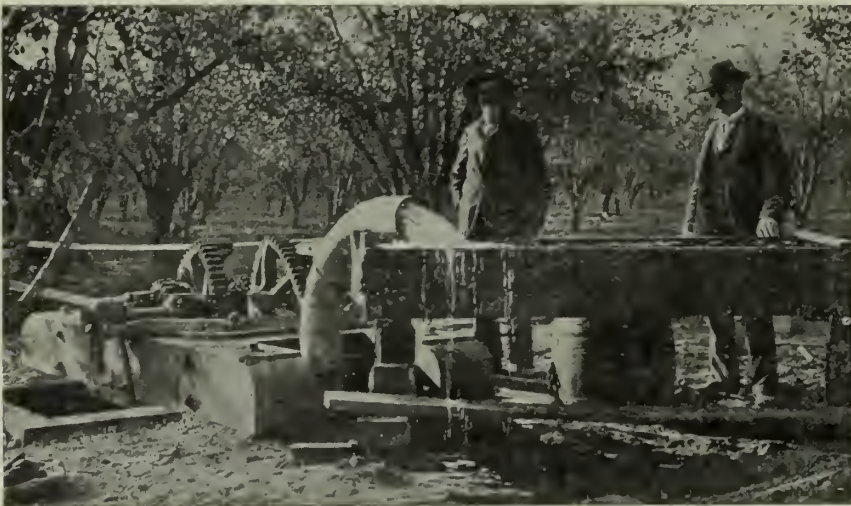


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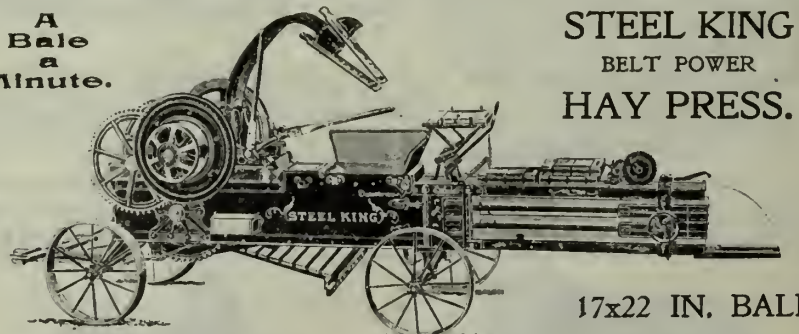
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 3.

SAN FRANCISCO, SATURDAY, JULY 20, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Prunes and Raisins.

Our illustrations represent prune and raisin curing as practiced in Kings county, the pictures being reproduced from Mr. F. V. Dewey's Kings County Directory, which we have already commended as a credit to the publisher and his county. The prune and the raisin are prominent in Kings county products, though they are happily supplemented by other products both of vegetable and animal origin, which give to that county exceptional standing as a region of safe farming because of this breadth and diversity. We choose these pictures just at this time because they are typical of California's great summer industry—fruit curing. It is not well to call it "drying," because the old days of dried fruits have well nigh passed by. The art of curing stops short of the old end of reaching something which will rattle and gives a product from which just enough water has been set free to render the remaining juice dense enough to resist fermentation. This is curing; and if the example set by the prune people in calling their organization the Cured Fruit Association should be followed in all references to fruit which is rendered imperishable by the proper degree of evaporation, it would more fitly present the facts and be more pleasantly suggestive of retention of fresh fruit qualities. Perhaps the next generation may reach this reform in terms.

Our scenes are suggestive first of the fact that California is a great land of open air curing. In most parts of the State where fruit is grown the midsummer and early autumn skies are cloudless and the air sufficiently thirsty to

of the curing enterprises. When it is said that California has produced in a single season something like one hundred and fifty million pounds of prunes, it seems large; but the figures do not impress the reader so vividly with immensity as does the sight of even a few tons spread out to view. There is something in the sight of fruit spread out by the acre which calls forth an exclamation when statistics may be endured without even a sigh. The same thing is true of raisin curing. The raisin crop of California

plains. Next to the sight of the real thing is the catch of the camera, which appears on this page. To the distant reader these views may convey new impressions in the way we have suggested.

### Plants for Alkali Soils.

The recent reports of the agricultural department of the State University have shown that there is a great difference in the toleration of different plants



Curing Raisins and Prunes in Kings County, California.

take from the exposed fruit its surplus moisture. These curing qualities of the day time are supplemented by scantiness of dew by night, so that during the best of the season curing proceeds regularly, though of course not evenly, until the end is reached. It is largely due to this advantage of our summer climate that California producers can furnish such fine cured fruits at the prices they command and still have a margin of profit for the grower.

Another suggestion of the pictures is of the extent

has exceeded a value of three and one-half million dollars in a year, but even this talk of money impresses one less than to see a large vineyard with the vines and raisin trays reaching out of sight in all directions. All this is proof of the old adage that seeing is believing, and our observation is that no matter how familiar one may be with the statistics of California's special products, he is still made to realize something new when one sees even a single large spread reaching to the distant sky line of the

for the presence of alkaline salts in the soil. We have heretofore shown the plants which have proved most resistant and impressed the importance of the investigation still in progress by Prof. Hilgard and his assistants. It seems that the Division of Soils of the Department at Washington proposes to carry on the same kind of work; and perhaps with all these investigators at work, we may find things which will make even the meanest alkali a thing to be sought after. The San Joaquin valley papers state that Mr. T. H. Kearney, connected with the Department of Agriculture—division of vegetable physiology and pathology—has been sent by the Government to carry on experiments with alfalfa, barley and other crops in order to render them immune to alkali. He intends to apply the theory of natural selection—that is, he will find a plant of barley that thrives fairly well on alkali. He will pick out the best that he can find. The plan is to propagate that individual piece of barley land, selecting the best of its decedents to similar treatment, and so on until a species is obtained that will thrive on alkali land. Evidently if Mr. Kearney is to wait for this to be accomplished, as the valley journals intimate, he may be a resident of the valley the rest of his natural life—but that would not be the worst thing that could happen to a man. We are told that he does not propose to wait for this if he can help it, for in Algiers there is a barley which does well in soil containing ten times more alkali than soil in this country where ordinary barley will not grow. It is proposed to import some of this Algerian barley to try it out in our alkali and to develop the species to a higher degree of immunity.



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E. J. WICKSON, ..... Horticultural Editor.

San Francisco, July 20, 1901.

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## The Week.

The city is overcome this week with the invasion by the Epworth Leaguers from the whole country. All avenues of travel are thronged; all public places and conveyances are filled to overflowing with the city's guests. Audiences of ten thousand people are data by which to measure the multitude, and several times this number will not exceed the present accession to the temporary population of the metropolis. Grand concourses and entertainments of the better sort are amply provided, while to many the consciousness that they are standing on the western rim of the continent and looking out on the grand Pacific, in the clear air and moderate temperatures of California, seems of itself to be entertainment enough. The old Californian renews his youth as he views these countless throngs experiencing the first thrills of love for California as they came to him decades ago.

After the days in the city the Epworths will fly to all parts of the State. Formal receptions are planned in many places and informal visits will be made everywhere. It will be a good thing for the State to have entertained such guests, and no doubt the State will anew deserve its old repute for generous hospitality.

There has come something new in wheat—that is firmness and advance, though the latter be slight. The terrific heat and drouth in some of the central grain-growing States tones up our local markets, even though some labor trouble stops ship loading at Port Costa. Spot wheat is strong at a slight advance whenever sales are made. Futures show greater advance than spot. Barley is a little stronger also, but there is not an active demand at the higher prices; feed barley is helped more than shipping. Oats are unsettled for new whites, which are just arriving; new red and black oats are steady at last week's prices, one buyer having been quite active at the higher rates. Rye is slow and low, while corn is scarce and high. Beans are unchanged; all are waiting for the new crop. Millstuffs are scarce and prices against the buyer. Hay is weak, with heavy offerings, though quotations are about the same—fine wheat and alfalfa being in best shape. Beef is a little easier and quiet; mutton is steady; lamb and veal are firm, the latter particularly so. Hogs are stiff, with some Eastern now coming. Butter is higher, a condition which the holders of storage butter are interested in promoting. Cheese is firm, with light stocks; some Oregon and Utah cheese is arriving—the latter selling for Eastern, though not in cheddar shapes. Eggs are higher, but only the

best, largest, select, fresh eggs are gaining the advance. Poultry has been in good shape, but at the close the market is lower under heavy receipts. Potatoes are in good demand and prices favorable. Onions are steady; reds are nearly out. Fresh fruits are selling fairly all around. Lemons are high still as limes are scarce. Dried fruits are held firmly and the best grades are not offering: some inferior grades are being pushed into sale. New evaporated apples have sold well and a few pitted plums have been disposed of. Some prunes and apricots are being taken for Germany. Old almonds are held for 10c, which buyers say they cannot pay. They may find out how to do it later. Holders of honey refuse present offers. Wool is firm for all fine grades, which are largely cleared out. Coarse and medium wools are hanging fire. Hops are undeveloped yet.

And now a sugar war is promised which may help our canners to pay a little more for fruit for the sake of getting cheaper sugar. The sugar trust has cut the price of sugar in California  $\frac{1}{2}$  cent per pound, and this will put the beet sugar makers to their mettle. One authority estimates that this cut of \$10 a ton means a total difference of over \$3,000,000 in the sugar produced and refined in California, of which \$1,000,000 will come from the beet sugar men. Those who handle sugar say that the slash in prices by the trust is to force the beet sugar producers, led by the Oxnards, to go back to the old method of sending their raw sugar to the trust refinery to be refined before it is marketed, instead of putting it on the market through the present process, which does not necessitate the refining in the trust establishment. As the beet sugar men represent many millions of capital, the fight may be a great one. There are several things which can be done which will not please the sugar trust.

All of the blue-blooded trotting and pacing horses that are in training for the races this year are congregated at the State Fair grounds in Sacramento, in preparation for the meeting of the Pacific Coast Trotting Horse Breeders' Association, which will be held on that racecourse July 30th, 31st and Aug. 1st, 2nd and 3rd. This meeting will open the racing circuit for 1901, and will be followed by a meeting at Santa Rosa and one at Woodland, to be held before the State Fair. From the speed shown by the horses in their work-outs, it is expected that a number of green ones will come to the front at this meeting, as the Sacramento track will be in prime condition for fast time. The Pacific Coast Trotting Horse Breeders' Association is one of the oldest and strongest organizations of the kind in the country, and numbers among its members the proprietors of all the leading breeding farms in the State and all of the well known horsemen. The Association employs paid officials in the judges' stand and conducts its races strictly according to rule.

The State Board of Horticulture is having much to do to get its plans in final shape. The untimely death of B. M. Lelong seems to have created some confusion and the incoming of several new members also requires adjustment. There was a meeting held in Sacramento on Monday of this week, at which a full discussion of the affairs of the board was had. The election of a secretary to succeed Mr. Lelong was not, however, effected. There was a wealth of candidates, which, perhaps, had something to do with the trouble.

Prof. D. G. Fairchild of the Division of Agrostology of the U. S. Department of Agriculture is now in California investigating grass and clover growing. He has chased this matter across the arid half of the country and now comes to California to learn the facts about our alfalfa growing, grain-hay making, etc. He finds our practices very novel and interesting, and will no doubt make a report which will reflect these characters to the outside world.

Mr. A. V. Stubeauch, who was connected with the agricultural department for several years as student and assistant, and last year did himself credit in post graduate work at Cornell University, has been appointed Assistant Professor of Horticulture at the University of Illinois. Being familiar with the advanced fruit growing practices and policies of California, he can conduct his Illinois work on very broad lines.

## QUERIES AND REPLIES.

### Apparently Lack of Moisture.

TO THE EDITOR:—I forward to you a sample of diseased prune leaves. As you will observe, it is in all probability a fungus disease. It first started in May on a few scattered trees, but since has spread more or less over fifty acres. The sample has been gathered from the most affected trees. I have used considerable dry sulphur without being able to check the spread of the fungus. The trees have been winter irrigated, and while the top soil layer for some 4 or 5 feet is practically dry, at 4 to 6 feet we find considerable moisture, and water at 16 feet. So it is not a question of moisture, as the trees are nine and ten years old and very vigorous and healthy. I intend to irrigate again within a week or two in order to strengthen the trees.—GROWER, Woodland.

Your specimens of prune leaves and twigs show a certain amount of shothole fungus, but not enough to cause the generally unfavorable appearance of the foliage. The dying of the leaves around the margin and the general slimness of the growth seem to clearly indicate a lack of moisture. The drying of the top soil to a depth of 4 or 5 feet is probably the cause of your trouble, and irrigation as soon as possible suggests itself as a proper treatment. It is not strange to have this appearance come upon the trees or parts of trees in isolated spots, because for some reason or other the suffering trees have not rooted so deeply, or the moisture has been lost out of those places. Part of the tree may be affected and not the whole. At all events, there does not appear to be any disease in sufficient amount to cause the injury.

### Shy Bearing of Royal Ann.

TO THE EDITOR:—Mr. Ehrhorn of this county advised me to write to you about my cherry orchard. I have a ten-acre Royal Ann cherry orchard, now fourteen years old, on very nice sandy loam soil. The trees are very thrifty and very large and well watered every year, but they have never returned much fruit—only three to twelve tons in any one year. The trees bloom well and set very full—too full—and when the fruit is about as big as very large wheat kernels, it drops off, so by the time they are ripe very few are left. In my opinion, the trees make too much wood and not enough fruit. What can be done to make more fruit and less wood? There are fourteen black cherry trees among the Royal Anns which have a big crop every year.—A. B., San Jose.

Cherry trees do sometimes grow so vigorously that fruit bearing is postponed for a long term of years. This excessive wood growth can be discouraged by allowing the orchard to go uncultivated for a year, thus reducing the moisture supply and sometimes this treatment induces fruit bearing. It seems, however, that your trees may fail for lack of cross-pollination. The bearing of the Royal Ann is sometimes found more satisfactory when associated with other trees. You would be able to judge perhaps of this if you noticed whether the trees which are near to the black cherries bear better than those which are far away from them. The fact that the black cherries are constant bearers under the same conditions with the Royal Anns would indicate that it is lack of pollination, and not conditions favoring wood growth which is involved in this case. If you find that the trees near the black cherries are the best bearers in the orchard, your future course would lie in grafting over part of your Royal Anns into a pollinating variety.

### Caprification.

TO THE EDITOR:—Are the wild figs which carry the fig insects the common old black figs of California. If not, where can I get wild figs and fig insects. We have two old trees of the Bulletin Smyrna which lose their fruit regularly, although occasionally one ripens. Will the fig insect help them?—FRUIT GROWER, Lambert.

You do not read the PACIFIC RURAL PRESS very carefully or you would understand all about this matter, which has been under discussion in our columns for two or three years past. It has been shown that the fig of commerce, the one which is most valuable for drying purposes needs the visitation of insects from the wild fig tree. The wild fig is quite different from the figs which are commonly grown in California and you can get trees or cuttings from nurserymen dealing in this line of stock. Mr. Roeding at Fresno has given most attention to this matter and will, we believe, be prepared to furnish both the insects and the wild fig trees. The Bulletin Smyrna



trees which you have will be converted into profitable bearing trees by the presence of this insect. The one or two specimens that you speak of must have been pollinated in some way.

Cistern Building.

TO THE EDITOR:—I have taken up forty acres as a homestead in the hills, and a well has been dug 60 odd feet deep without getting water. I am now thinking about building a cistern. Can you give information as to the construction of it?—READER, Yolo county.

The cheapest way to make a cistern if you have a good firm clay subsoil, is to make a rectangular excavation with the sides sloping away from the perpendicular about 1 foot in 5 of depth. Level the excavation carefully on the top and lay a course or two of brick, then cement the bottom and sides carefully with two coats of pure Portland cement, carrying the cement from the dirt bank to the bricks; lay cross pieces on top of the brick wall of 4x4 redwood scantling. Fill up between the ends with brick and cement, flush with the top of the cross pieces, cover with a layer of inch boards, and then with another course crosswise, so as to break joints. Cut in a manhole and make a box to hold the pump. The boards can be covered with a thin layer of earth to save their wear, etc. By this construction, with the ground properly graded around, the inflow of surface water and the entrance of various creeping things will be prevented. A better cistern can be built of brick laid in Portland cement, the top arched over and the whole well cemented on the inside, but this is a much more expensive operation.

Is Ten Acres Enough?

TO THE EDITOR:—I am a constant reader of your valuable paper. I own ten acres of land in Tehama county and have it planted to fruit trees two years old. I intend to move there to live. Do you think that ten acres can be made to support a family comfortably in that part of the State? I have been told that it can not be done, and yet some state that it can.—READER, Maine.

We are very sorry that we cannot give you any very definite and encouraging answers to your questions. Whether ten acres of land will be found adequate to the support of a family depends upon the land, the crop and the man, and the size of the family. There are unquestionably some pieces of ten acres of fine land which were fortunately planted in just the fruit or some other crop which the market most desired, which have yielded very satisfactory returns; in fact, hundreds of dollars per acre have been secured. On the other hand, there are many pieces of much larger area which have been planted in fruit and brought to bearing without yielding at all satisfactory returns. On the whole, with the average land and the average crop, we should say that ten acres of land was not enough.

Pruning Peaches.

TO THE EDITOR:—If I should prune my Hale peaches way back on the old wood would they grow enough to have a good crop next year? The limbs have grown long and some of them broken off this year. I like my peach trees stocky. Do you think if I cut them back at once and watered them well they would grow enough?—GROWER, Placer county.

The proper time to cut back a peach to force out new wood below is about the time the growth starts or a little before. Decapitation now would not secure good strong growth for next summer's fruiting. You can cut back somewhat now if the trees are thick, but we should retain enough wood to give a crop next year. You have your choice between this and letting the trees go until next winter and then cut back all around and lose most of next year's bearing for the sake of getting better crops thereafter on good strong wood lower down on the tree.

Morning Glory in a Vineyard.

TO THE EDITOR:—How can morning glory be exterminated in a vineyard? It is doing much harm to the growth of the vines.—SUBSCRIBER, Healdsburg.

This is a difficult proposition, because the growth of the vines makes it so difficult to get at all the ground during the growing season. The only practical way to kill morning glory is to persistently cut it off under ground and let no shoots get to the light; using a knife-edge weed cutter running flat wise and not turning over the surface much. You can use

this between the rows and work around the vines with a hoe—but never waiting until you can see what you are hoeing for. If you wait to see the morning glory you will miss your object. This is the only way we know of and we acknowledge that some vineyards are not worth following it.

Apricot Rust.

TO THE EDITOR:—The leaves are falling prematurely from some of our young apricot trees, and upon examination I find that they are covered with scale, as per specimens which I am sending to you under separate cover. Will you kindly inform me what it is, when would be the proper time to spray it, and what spray to use?—J. H. CHAFFEE, Ventura.

You have not a scale but a fungus disease to deal with. It is properly called a rust, as it forms postules which rise above the leaf surface. It is probably the same fungus which attacks the prune in your part of the State, doing most harm usually on nursery stock. These postules have a general resemblance to small, round scale insects. The proper treatment is the Bordeaux mixture earlier in the season, unless the trees are carrying a crop which is likely to be stained; in that case the copper carbonate solution should be used.

Sandy Soil and Phylloxera.

TO THE EDITOR:—How can I determine whether soil contains 60% siliceous sand. I have forty acres sandy soil, good for peaches, medium for vines, poor for alfalfa (no alkali). I intended to plant to peaches but might plant to vines if soil is immune to phylloxera.—H. W. WRIGHTSON, Oleander.

It is not an easy thing outside of the laboratory with the best appliances to determine what exact percentage of sand the soil may contain, nor the character of the grit which you find in it. The determination would be made for you by sending sample to Professor E. W. Hilgard of the University of California, Berkeley. We would, however, advise you to be very cautious about counting on sandiness as giving immunity against phylloxera, for, as a rule, land which is too sandy for this insect is too sandy for other purposes. If you have demonstrated it to be good for peaches, peaches are the proper crop for it.

Tall Meadow Oat Grass.

TO THE EDITOR:—Is there more than one kind of tall oat grass? I sent to San Francisco last winter for seed and they said they usually kept tall meadow oat grass. I received some seed called tall oat grass from the College of Agriculture at Berkeley about ten years ago; it has proven a grand success, and I wanted more seed of the kind, but could not get it in San Francisco.—E. A. JENKS, Harris.

Tall meadow oat grass and tall oat grass are the same plant, the former being the full name and the latter a contraction. It is proving so useful in California that no doubt our San Francisco seedsmen will be supplied with it before sowing time, if they have not now supplies on hand. It should be sown about the time of the first rains or as soon as the ground is moist enough for cultivation.

Famishing Pears.

TO THE EDITOR:—I send samples of pear twigs. Kindly describe and prescribe. The trees have not been cultivated this year, but have been allowed to pass. The land is adobe.—G. H. H., Corning.

The foliage shows some signs of pear scab or smut, but the chief part of the trouble is due to the famishing of the trees. This year's growth is from 1½ to 4 inches—thin, weak and shriveling. The only prescription must be good cultivation—winter plowing, to let in water; frequent summer stirring to keep it in. If this will not give the tree moisture enough to make good growth and hold their leaves in good, vigorous condition until fall, irrigation must be provided. There is no use in doctoring a tree which has no chance to grow; its treatment must be hygienic, not medicinal.

Slugs in Clover.

TO THE EDITOR:—Can anything be done to keep down small snails or slugs in a clover lawn? They are so numerous that hand picking has evidently little effect. Is there any other method of getting rid of the pest, or must it be a continual hand warfare?—CARMELITA, San Francisco.

Our observation is that slugs in a clover lawn are the result of excessive watering, or, at least, of too fre-

quent surface sprinkling. When the ground was given a thorough soaking, say, once a week, and the foliage allowed to become dry, except for dew, during the intervening days, we have had a very thrifty growth of clover and no slugs. On the other hand, clover daily sprinkled has seemed to be almost alive with the pests. Clover does not need as much water as some give it. Try thorough soaking occasionally and stop the frequent sprinkling.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending July 15, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Nearly normal temperature has prevailed during the week and conditions have been favorable for growing crops and all kinds of farm work. Grain harvest, hay making and baling have progressed rapidly. Wheat, barley and hay are of excellent quality, and in some sections the yield is above average. Grass and brush fires have caused slight damage in Tehama county. Green feed is becoming scarce in some places. Corn, hops and potatoes are doing well. Fruit picking, drying and canning are progressing. Grapes and citrus fruits are in good condition.

COAST AND BAY SECTIONS.

Conditions have been generally favorable for all crops, except that prunes in the Santa Clara valley have been somewhat injured by heat. Grain harvest and thrashing are progressing and good crops are being gathered. In Sonoma county the yield is the largest for several years. Hay baling continues; in San Benito county the yield and quality are above the average. Hops, corn and sugar beets are in good condition. Fruit picking and drying are in progress. Apricots and prunes are yielding light crops, but are mostly of good size. Citrus fruits and grapes are looking well.

SAN JOAQUIN VALLEY.

Excellent weather prevailed during the past week for the ripening and harvesting of all crops. The grain harvest continues to progress rapidly. The yield is fully up to expectations; the crop will be large and the quality is excellent. Considerable grain has been shipped, but far the greater portion is being stored in the warehouses. Deciduous fruits are ripening rapidly, and in some localities the apricot crop has been gathered. Peaches and plums are being handled in large quantities. In some localities the crop is good and in others light. The quality of the fruit is reported to be excellent. Canneries and driers are in full operation. Melons are making rapid progress and are of fine quality. Grapes are doing nicely and the prospects are for a full crop. Water for irrigation is plentiful. Stock of all kinds are doing well.

SOUTHERN CALIFORNIA.

The weather during the week has been generally clear and warm, with a few foggy mornings along the coast. There was a trace of rain on the 10th at Poway. A fair crop of wheat is being harvested, but in some sections the grain is badly rusted. The corn crop will be light. Sugar beets are thrifty and will yield a good crop. Fruit picking and drying are progressing; there is a light crop of most varieties. Grapes, walnuts and citrus fruits are in good condition.

BEAN CROP SPECIAL.—Mr. L. E. Blochman of Santa Maria contributes the following: "Owing to unusually cool weather in June and the damage to vines by worms the plants are below normal size, and the bean crop will be much less than anticipated. Present conditions are very favorable, however. The bean belt includes all of San Luis Obispo county and northern Santa Barbara county, and is one of the largest centers for the small white (navy) bean."

EUREKA SUMMARY.—Corn and peas are doing well, but potatoes, and root crops generally, are beginning to show the effect of continued dry weather. Oat haying is progressing finely and yielding better than was expected.

LOS ANGELES SUMMARY.—The weather is favorable for ripening and drying fruit. Apricot harvest is on; crop light. Walnuts are growing well, but dropping more than usual. The honey crop is large in the southern mountains, where white sage is in full bloom.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, July 17, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week	Total Seasonal Rainfall to Date	Total Seasonal Rainfall to Same Date Last Year	Average Seasonal Rainfall to Date	Maximum Temperature for the Week	Minimum Temperature for the Week
Eureka.....	.01	.01	T	.05	66	48
Red Bluff.....	.00	.00	.00	.01	98	56
Sacramento.....	.00	.00	.00	T	96	52
San Francisco.....	.00	.00	.00	T	64	48
Fresno.....	.00	.00	.00	T	102	56
Independence.....	.00	.00	.00	T	94	62
San Luis Obispo.....	.00	.00	T	T	84	44
Los Angeles.....	.00	.00	.00	T	88	54
San Diego.....	.00	.00	.00	T	72	60
Yuma.....	.00	T	.00	.10	108	72



## HORTICULTURE.

### The Horticultural Commissioner and His Duties.

By R. P. CUNDIFF of Riverside, before the Horticultural Commissioners' Association.

The question of how, as horticultural commissioners we can best solve the great and rapidly increasing horticultural interests of our State, is one that should vitally concern any one who holds this responsible position. Having been requested by our presiding officer to present my views upon this question, I have consented to do so with some misgivings as to my ability to enlighten our members upon a subject that, in my opinion, could have been better handled by older and wiser members of our society. The first requisite is one of fitness for the position of commissioner. The man appointed to this position should be of intelligence and integrity, if possible one who has made a study of entomology, to have as far as possible a knowledge of same to enable him to correctly classify any insect pests with which he is likely to come in contact in the discharge of his duties as commissioner; also, to have as far as possible a knowledge of such insect enemies as prey upon injurious insects. In addition to above, he should have a thorough knowledge of artificial means of abating or destroying pests. A knowledge of vegetable pathology is also important, at least a sufficient acquaintance with same to be able to correctly diagnose and apply proper remedies for the cure of such plant diseases as he will be likely to come in contact with in his locality.

He should be a man of first-class executive ability: one who at all times will be able to secure a maximum amount of benefits to the horticultural interests of his locality at a minimum of expense.

**MORAL SUASION.**—The horticultural law of our State clothes the commissioner with powers, seemingly arbitrary, regarding the eradication of dangerous pests. This power should never be used in a haughty or unjust manner. The unwise use of this authority has in some instances made enemies for the horticultural commissioner, that, by a reasonable amount of diplomacy, could have been averted. Not that I would counsel a weak or vacillating policy when it comes to a question of any individual as against a community interest.

There are instances likely to occur when it would be necessary for the commissioner to assert his authority in a prompt and positive manner. I am, however, persuaded that in a great majority of instances, in matters of enforced eradication of pests, that a friendly appeal to the individual will convince him that you are working for instead of against his interests. The eradication of pests, in my opinion, should, wherever possible, be directly under the supervision of the commission.

**PUBLIC WORK.**—The commissioner of each district should be supplied with suitable paraphernalia by the county, such as fumigating and spraying outfits to do all necessary work of eradication. A careful and experienced man should be employed by the commissioner to have charge of such outfits during the time such work is being done. The commissioner should attend to serving notices upon all parties owning infested orchards, also to securing contracts, collecting bills, etc., for the work.

In no case should the grower or owner of an infested orchard be compelled to pay profit for such work, beyond the actual expense of material and labor, with a small per cent sufficient to keep the outfit in good repair. The competitive or contract system of fumigation and spraying should be abolished. No one can reasonably expect to have work done as cheaply and effectively under a system where a profit is the only incentive for a person to engage in the work, as it could be done as cheaply and effectively under the control of a competent commissioner. The county should provide all chemicals, charging same to the commission, and as the collections are made by the commissioner for work done, he should return all amounts due the county for chemicals, after labor and actual expenses of operating are paid. The matter of supervising the eradication of pests should be one of the most important duties of the commissioner.

**FITNESS.**—The horticultural inspector should, so far as possible, be selected for his especial fitness for the position, and should be required at all times to be industrious and conscientious in the discharge of his duties. I regret to say that in some instances the appointment of commissioners, as well as inspectors, has been influenced too much by political considerations. This has caused much criticism and dissatisfaction with people, who, but for this, would be our best supporters.

There are many reasons why the positions of commissioner and inspector should not be subject to the ever changing fortunes of politics, chief among which I might mention the fact, that, if a person receiving the appointment is confident his tenure of office depends upon his ability to make himself useful to the horticultural interests of his locality, both his pride and self protection would dictate to him the necessity of giving to the department his best efforts.

If, upon the other hand, he should receive the appointment because of his ability to do politics, and serve those in a political way who had given him his

position, he might succeed as a politician, but would most assuredly fail as a horticultural officer. It would simply be a repetition of the old adage that "you cannot serve two masters."

Nothing would improve the personnel and efficiency of the horticultural commission so much as to take it entirely out of politics.

**THE RIGHT SORT OF A COMMISSIONER.**—Let the appointments be given to those whose qualifications are such that they can demonstrate to the horticulturist and taxpayer that they are competent to perform the duties of their office in a way that will be a positive benefit to the horticultural interests of their district. The commissioner should be a man who is studious. He should be at all times able to give prompt and reliable information and advice to those seeking such from his department. This can only be done by constant and careful study, as well as close observation.

The bulletins and reports of the Divisions of Entomology and Pathology, issued from time to time by the Department of Agriculture, should engage his attention and careful study.

The advantages of a competent horticultural commission in any country, where fruit growing is engaged in to any extent, are many and important. The enemies to fruit growing in the way of insect pests and diseases are in some localities of our State already a serious drain upon the income of the orchardist.

The best and most economical methods of combating the pests that we have should engage his earnest attention, as well as a determined effort to prevent the introduction of new ones.

In conclusion, I would say that California has the best horticultural law of any State in the Union, and it remains almost entirely with the various horticultural commissioners of the State to see that its provisions are wisely and economically administered.

If this is done I apprehend that we need have no fear that any future legislature will attempt to destroy the present law by passing such a measure as Assembly bill No. 681, which would, but for the wisdom of the Governor in using his veto power, have practically destroyed the splendid horticultural law as it now stands.

### Why California Succeeds.

Mr. George C. Richardson, president of the National Apple Shippers' Association, in a talk on "Orcharding" before the Kansas State Horticultural Society in Topeka said in part:

The State of California is famed for producing large yields of handsome and attractive fruit, such as pears, peaches, prunes, grapes, apples, oranges and lemons. The phenomenal success of those engaged in fruit growing in California is attributed almost entirely to the thorough and practical cultivation of the orchards and the proper care in selecting and packing the products for market. Their sales extend to all parts of the United States and many parts of Europe, and, notwithstanding the great distance from markets and high freight rates, those engaged in this line make fabulous profits, and some orchards are valued at from \$1000 to \$2000 per acre. The majority of orchards of other States show neglect and a lack of proper cultivation and proper care of the trees, which causes tend to greatly reduce the quality and quantity of the fruit.

### How About the Bell Cling?

TO THE EDITOR:—Has any reader of the PACIFIC RURAL PRESS had any experience with this cling? I would like to hear something regarding its bearing capacity, canning qualities, freedom from curl leaf, time of ripening, etc. It was propagated by Trumbull & Beebe about nine years ago.

Loomis.

ANDREW RYDER.

## FRUIT MARKETING.

### The Raisin Situation.

M. Theodore Kearney, president of the Raisin Growers' Association, was in New York last week on his way to Europe, and gave one of the metropolitan dailies a condensed statement of the raisin situation, which will be useful to many of our readers who from the mass of materials presented by local journals of the raisin districts have probably not drawn very clear conceptions. The following is a general view of the present status:

**THE LAST CROP.**—We had a large crop of raisins last year and did not succeed in selling the whole of the crop during the season. When the holiday trade was over we had 1500 carloads unsold out of the 4000 carloads raised. But the means we have adopted in offering a lot of raisins for sale at reduced prices in order to advertise seeded raisins and help sell off stock are materially improving the situation statistically. We have made a cut price on seeded raisins and have put them up in cartons, having in

them what the trade calls "stickers" to name the retail price, which is 10 cents per pound. We have also sold a lot of raisins to mincemeat manufacturers, and for the ordinary requirements of the trade we have reduced our stock to less than 700 carloads. There is always a very active demand for seeded raisins when the fall trade opens up, and it will take about 400 carloads to supply the seeding companies with stock to work upon before the new crop comes in. That, you see, cuts the crop down until there is of all sorts about 300 carloads for the trade to take over. To sum it up, the carry-over will all be cleaned up before the new crop comes in.

**THE NEW PLAN.**—There has been some talk about the Raisin Association and the Prune Association not being legally strong. Several suits were brought by the Prune Association people and the courts decided against them. There has been none brought by the Raisin Growers' Association that we have lost, because we understood the contract better than the prune people and have, therefore, conducted our legal affairs in a more successful manner. But the idea has gone abroad that the growers are not bound by the arrangement, the Prune Association contract being the same as the raisin contract, and we have determined to get up a new arrangement, and we are now asking our growers to sign leases. Every grower must lease his property to the Association. I called the growers together and explained the situation. The lease of every vineyard to the Association means that the Association will get a much stronger hold on the crop, and the public meeting of the growers entirely approved the idea. The papers have now been prepared and we have incorporated under the laws of New Jersey instead of under the laws of California, and within the next sixty days I expect to have the crop secured by lease. In fact, under the new arrangement the Association will be the producer and the grower will simply be an employee. The Association will be the owner of the crop. We are now making a canvass for signatures to these papers and on September 1 I believe all will have signed. I have no doubt the growers, while they will hesitate at first about signing leases, will eventually sign because there is no choice—they will sign the leases or nothing.

**THE COMING CROP.**—Last year there was an exceptionally large crop, owing to the very unusually dry weather. The season was so favorable that nearly every grower cured his crop instead of selling any to the wineries. I do not look for another such crop again for many years. The winery people are short of Muscat wine, and as they could get no grapes to make Muscat brandy the price of that brandy has doubled in the last three months. They have been running from stocks of previous years, as we have turned all our grapes into raisins instead of selling a portion to the wineries for brandy and wine purposes. This year, however, there is a great shortage in the wine crop of the State, owing to frosts, and I expect high prices will be offered to our growers for our grapes. The result will be that very few Sultana or Thompson Seedless will be turned into raisins, as the crop can be used for wine purposes and will command high prices.

I expect liberal offers for some of our Muscatel crop of grapes from the wineries. This will also reduce the quantity that can be made into raisins the coming season. I think, therefore, there will be only a moderate crop of raisins to be made this year. This year's crop has been considerably hurt by frosts last spring, so that the yield will not be any more than an average one this season.

**THE FUTURE.**—If 75% of the growers sign the new contracts we shall continue the Association. But we are telling the growers that all of them must join if they wish to maintain prices. There is a very bitter feeling among the growers against those who have remained out of the Association, and at their public meeting the growers have called upon the directors, if those growers should still continue to remain out, to cut the prices to such an extent that they will have no profit in producing raisins. The directors will follow these instructions if it becomes necessary. But the feeling is so generally understood by those on the outside that it will work its own cure, and, in my judgment, bring in all but an extremely small number of the raisin growers. While it is the determination of most of the growers to sacrifice their crops, if necessary, because if outside growers, I doubt whether that necessity will arise.

To sum up, I look for a crop of raisins a little smaller in quantity than what the market will require, and at prices that will not be considered excessive.

### Opposed to Building at Present.

TO THE EDITOR:—At a meeting of the board of directors of the Napa Fruit Co. the following resolution was passed:

Resolved, That in view of the urgent need for money by the prune growers the Napa Fruit Co. vigorously protests against the expenditure of any moneys by the California Cured Fruit Association other than what is absolutely needed for the marketing of prunes now on hand, and is especially opposed to the proposed erection of a packing house at San Jose or elsewhere.

E. E. COOK, Secretary.

NAPA FRUIT CO.



## FRUIT PRESERVATION.

### Apricot Drying in the Santa Clara Valley.

The record of Santa Clara county in dried apricot shipments is 350 carloads of twelve tons each, or a total of 8,400,000 pounds. This high mark was set four years ago and has not been reached since by a good deal. The season for this fruit is now at its height, and the San Jose Mercury has a timely article on the policy and practice of drying which will be interesting in all apricot districts.

**HELP AND ITS HANDLING.**—The busy fruit season of Santa Clara valley is a season when veritably the people are busy as bees indeed. In truth, scarcely a year comes when it is not necessary to import many people to aid in packing or drying the fruit. Acres of ground about the big driers and canneries are left as a common and on this space the people employed live in tents. Attention is given to perfect sanitation, and on the grounds water pipes are laid and those who camp have water and firewood at hand for use in cooking and such laundry work as may be necessary.

**TO DRY OR SELL TO CANNERS.**—Practical growers after ten or fifteen years experience in growing the apricot have found that much depends on the demand from the canners to determine them on their course in disposing of the fruit from the tree. At the average market price for the last five years growers were inclined to sell their fruit to the canners if they could get \$30 a ton for it. The finer the fruit, that is in size, the higher the price from the canner, and the more inducement to sell the fruit for preservation in its fresh state. With a base price of \$30 a ton for the run of the average orchard, extra choice fruit would run to \$40, or even more. The canning establishments desire large fruit, for it not only looks better but commands a better price.

When apricots are to be dried it is not so essential that they shall be gathered at a certain stage of ripeness as it is when they are to be canned. The canners must have the fruit when it is ripe—just ripe and no more. If the fruit gets a little soft it is worthless for canning. This is one of the drawbacks in the crop. For drying the fruit may be so ripe that it is much past the "firm" stage and may be even soft. So long as it is sound and not the least bit of fermentation has set in it is all right for drying. In fact the riper the fruit without fermentation the less water and the more sugar it contains and the quicker it dries and the better the dried product.

It takes from four to six and one-half tons of fresh fruit to make one ton of dried fruit. Careful growers place the average at somewhere from five to five and one-half tons, this amount depending somewhat on the variety of fruit, where grown and whether irrigated or not. Non-irrigated fruit will usually have less water and be sweeter than the irrigated product.

**THE PROCESS.**—When the grower has determined to dry his 'cots he waits until they are perfectly ripe on the trees. Then with a competent force he goes into the orchard and the 'cots are picked in the usual fruit boxes used in California—a box that contains something like three pecks, or a bushel, as is known in the East. As fast as the boxes are filled they are placed on the wagon and driven to the drier. When the fruit reaches the drier it is weighed and run through a grader to be sorted. Ralph Hersey, the present manager of the California Packers' Company, is said to be the first to grade the apricot, but this is now universal. The 'cots pass over an ordinary "shake" grader, the same machine used in grading prunes, but the slats are set farther apart, of course, than for prunes. As the 'cots come from the grader they are designated "prime," "standard," "choice" and "fancy," the smallest being the prime. This size is nominally an inch, that is, it will pass through an inch space, "standard" an inch and a quarter; "choice" from one and one-fourth to one and one-half inches and "fancy" from one and one-half to all above.

**CUTTING AND SPREADING.**—The fruit is caught in boxes and these are passed along to tables where girls are at work cutting it and taking out the pit. Usually four girls are employed at one table and they fill one tray before starting on another. The longer the fruit is left to the air after being cut before it is "treated" the darker it becomes. For this reason there is always hurry after starting a tray, to fill. The trays are 8 feet by 3 feet in size. As they are filled under the shed they are placed on a car and hurried to the sulphur house. The fruit goes on the trays in halves, skin down, and from twelve to fourteen trays are moved off and stacked up in the treating house. It remains here from one to two and one-half hours, depending on the condition of the fruit and atmospheric conditions. The longer it stays, as a rule, without getting impregnated with the sulphur the brighter it will be. From the treating house the trays are carried to the drying field, where they are left for from three to six days, this time being determined by atmospheric conditions and the state of ripeness and amount of water in the fruit. In case of foggy, cloudy weather—something unusual

in this valley—the fruit is cured in the stack, that is one tray on the top of another. This takes more time.

When the fruit has been properly dried it is taken up and hauled to the warehouse, where it is dumped into bins according to size. Here it will remain until marketed. It may be packed in boxes or sacks to suit the taste of the owner.

**THE FINANCIAL SIDE.**—With fruit at \$30 a ton, fresh, it is estimated that the dried product should sell for about 8 cents a pound or a little more, possibly 9 cents, to bring equal returns. The method of drying, whether at the commercial or co-operative drier or by the grower himself, is the same. The commercial drier charges about \$35 a ton to cover his cost. It is this charge the grower saves and secures as compensation for his labor if he dries his fruit himself, as can often be done where there is a large family, with profit.

The pits which come from the fruit are readily salable at \$10 a ton. It is said they are used as salted almonds and so sold. The hulls are sold for a little something. Prussic acid is made from them, and they are good fuel.

Girls are mentioned as halving the fruit. They are usually employed for this work, as they are quicker than men. They earn from 75 cents to \$1.50 a day for this labor, depending on the quickness of this work and the labor market.

**SEEKING A DRYING CLIMATE.**—Some apricots have been dried in this valley already this season, but they were not grown here. They belonged to growers in San Francisco and were grown in the Sacramento valley. The Berryessa Union had one contract to dry 150 tons of fresh fruit. The largest estimates of the dried product of this valley this year do not exceed fifty or sixty carloads and many growers say it will not reach half that quantity.

It has been stated that the 'cots are placed on the market as "prime," "standard," "choice" and "fancy." It should be said that with prime at 6 cents a pound the prices would be 7c, 9½c and 12½c for those running higher, according to the respective sizes. With the county exporting 8,400,000 pounds of apricots, the record for one year, at an average of 10 cents a pound, it can be seen that much money comes back to the grower. While no one can tell thus far in advance what the price will be, it is plain that those who are so fortunate as to have a crop of apricots this year will receive good returns whether they dry the fruit or sell it to canners.

## THE VINEYARD.

### That Scare in Santa Clara County.

**TO THE EDITOR:**—In your issue of July 6 I found quite a wail from the grape growers of Santa Clara county, especially on the west side, and an invitation to a free discussion by all your readers in answer to Mr. Lyangenberg. I will give you my surmises for what they may be worth and why I think that, perhaps, the grape will be the most profitable plant yet. But, to find the remedy, we must first look to the cause. This, I surmise, can be found in a single word—"exhaustion." This I ascribe to several causes, which I will enumerate separately.

**INSUFFICIENT PREPARATION OF SOIL.**—We know that most of the vineyards in this State were planted, like so much corn, on soil that was simply plowed the common depth, and the cuttings, to a great extent, planted with a crowbar. This, with the common cultivation with the plow and cultivator, created a hardpan, if not already existing, and forced the vines to find their sustenance in the surface soil, which made them more susceptible to drought.

**POOR CULTIVATION.**—During the low prices of grapes and wines many vineyards were neglected, and the vines were often insufficiently pruned, while weeds grew up around them. I know this was the case in Napa valley, and, I suppose, the same in Santa Clara.

**PHYLLOXERA.**—That this pest already existed in Santa Clara county in 1881 I have seen with my own eyes, and that it has spread during that time can easily be supposed.

**DROUGHT.**—The last dry years have certainly had their influence on the surface roots, especially where the vines could not get to the subsoil through the hardpan below.

**OVERPRODUCTION.**—It is the custom in this State with almost every product to always take, and not to give. When this is kept up for a number of years, without supplying the plant with nutriment through manure, is it surprising that its energies become exhausted and starvation results? For such an exhausted state even a small product is too much, and the plant requires a rest as well as a stimulant by manure. If it is too far gone already—as seems to be the case with many vineyards in Santa Clara and elsewhere—pull them up, give the soil a rest for a year or two, manuring when possible, and when you plant again prepare the ground thoroughly by plowing and subsoiling to at least 15 to 18 inches in the fall; plow again in spring before planting; plant with

resistants, and the chances are that you will have a healthy and productive vineyard.

To those whose vineyards are in a fair condition I would say: Plant a piece of new soil every year; prepare the ground well, letting the old vineyard bear what it can under rational treatment, and I firmly believe that grapes will pay better than any other crop you may put on that soil. I throw out these few thoughts as an individual opinion, leaving them to your readers for their investigation and discussion.

**FUMIGATION.**—That prohibitive ordinance of Los Angeles county:

Every importer of nursery stock from Louisiana and Florida, as well as from all counties north of San Luis Obispo, San Bernardino and Kern counties, must take out a license application, accompanied by a bond of \$5000, and give written notice of the arrival of their importations within twenty-four hours. The plants will then be inspected and fumigated, and in the case of vines, roots, grafts or cuttings from northern California, or any other district infected with phylloxera, they must be exposed for twenty-four hours to an atmosphere saturated with carbon bisulphide, and must thereafter remain in the hands of the inspector for six months, or until pronounced cured by the inspector.

So far the ordinance. If this does not prevent, there is no salvation for Los Angeles. If any of the plants, etc., survived such heroic treatment, they had more lives than the famous cat with nine. Well, the ways of this world are strange and difficult to fathom. This is another case of locking the stable after the horse is stolen, and surpasses even that famous ordinance of Fresno county, now rescinded, after eleven months of existence.

Napa, July 9.

GEORGE HUSMANN.

## THE POULTRY YARD.

### Marketing and Preserving Eggs.

By C. F. LANGWORTHY, Ph. D., in Farmers' Bulletin No. 128 of the U. S. Department of Agriculture.

In earlier times eggs, if sold at all, were marketed near the place where they were produced. Many are still sold in local markets; but, with improved methods of transportation, the market has been extended, and large quantities of eggs are shipped from this country and Canada not only to distant points in America, but to England and more distant countries. For shipping long distances there are special egg cases, and the shipper should select the kind which is preferred in the market which he desires to reach.

The shells of new-laid eggs should be wiped clean, if necessary, and the eggs graded as regards size. In some markets brown eggs are preferred to white. It is stated that in the Boston market brown-shelled eggs, such as are laid by Partridge Cochins, Dark Brahmas, Barred Plymouth Rocks, etc., sell at from 2 to 5 cents per dozen more than white-shelled eggs, such as are laid by Brown Leghorns, Buff Leghorns and White and Black Minorcas. In the New York market, on the other hand, white-shelled eggs bring the higher price. That the color of the shell has no relation to the food value is shown by analysis.

**SHIPPING EGGS.**—Eggs which are to be shipped, whether with or without a special attempt at preservation, should be perfectly fresh, and should never be packed in any material which has a disagreeable odor. Musty straw or bran will injure the flavor and keeping qualities of eggs packed in it. When shipped, eggs should not be placed near anything which has a disagreeable or strong odor. Keeping eggs near a cargo of apples during transportation has been known to injure their flavor and also their market value. As previously noted, micro-organisms may enter the egg through the minute pores in the shell and set up fermentation, which ruins the egg. In other words, it becomes rotten. The normal egg shell has a natural surface coating of mucilaginous matter, which hinders the entrance of these harmful organisms for a considerable time. If this coating is removed or softened by washing or otherwise, the keeping quality of the egg is much diminished. If the process of hatching has begun, the flavor of the egg is also injured.

**TESTING EGGS.**—There are many ways of testing the freshness of eggs which are more or less satisfactory. "Candling," as it is called, is one of the methods most commonly followed. The eggs are held up in a suitable device against a light. The fresh egg appears unclouded and almost translucent; if incubation has begun, a dark spot is visible, which increases in size according to the length of time incubation has continued. A rotten egg appears dark colored. Egg dealers become very expert in judging eggs by testing them by this and other methods.

The age of eggs may be approximately judged by taking advantage of the fact, that as they grow old, their density decreases through evaporation of moisture. According to Siebel, a new-laid egg placed in a vessel of brine made in the proportion of two ounces of salt to one pint of water, will at once sink to the bottom. An egg one day old will sink below the surface, but not to the bottom, while one three days old will swim just immersed in the liquid. If



more than three days old, the egg will float on the surface, the amount of shell exposed increasing with age; and if two weeks old, only a little of the shell will dip in the liquid.

The New York State Experiment Station studied the changes in the specific gravity of the eggs on keeping and found that on an average fresh eggs had a specific gravity of 1.090; after they were ten days old, of 1.072; after twenty days, of 1.053, and after thirty days, of 1.035. The test was not continued further. The changes in specific gravity correspond to the changes in water content. When eggs are kept, they continually lose water by evaporation through the pores in the shell. After ten days the average loss was found to be 1.60% of the water present in the egg when perfectly fresh; after twenty days, 3.16%, and after thirty days, 5%. The average temperature of the room where the eggs were kept was 63.8° F. The evaporation was found to increase somewhat with increased temperature. None of the eggs used in the 30-day test spoiled.

**COLD STORAGE OF EGGS.**—Fresh eggs are preserved in a number of ways which may, for convenience, be grouped under two general classes: (1) Use of low temperature, i. e., cold storage; and (2) excluding the air by coating, covering or immersing the eggs, some material being used which may or may not be a germicide. The two methods are often combined. The first method owes its value to the fact that micro-organisms, like larger forms of plant life, will not grow below a certain temperature, the necessary degree of cold varying with the species. So far as experiment shows, it is impossible to kill these minute plants, popularly called bacteria, or germs, by any degree of cold; and so, very low temperature is unnecessary for preserving eggs, even if it were not undesirable for other reasons, such as injury by freezing and increased cost. According to a recent report of the Canadian Commission of Agriculture and Dairying:

When fresh-laid eggs are put into cold storage with a sweet, pure atmosphere at a temperature of 34° F., very little, if any, change takes place in their quality. The egg cases should be fairly close to prevent circulation of air through them, which would cause evaporation of the egg contents.

Eggs should be carried on the cars and on the steamships at a temperature of from 42° to 38°. When cases containing eggs are removed from the cold-storage chamber, they should not be opened at once in an atmosphere where the temperature is warm. They should be left for two days unopened, so that the eggs may become gradually warmed to the temperature of the air in the room where they have been deposited, otherwise a condensation of moisture from the atmosphere will appear on the shells and give them the appearance of sweating. This so-called "sweating" is not an exudation through the shell of the egg, and can be entirely prevented in the manner indicated.

It is stated by Siebel that in practice in this country 32° to 33° F. is regarded as the best temperature for storing eggs, although some American packers prefer 31° to 34°, while English writers recommend a temperature of 40° to 45° as being equally satisfactory. The amount of moisture in the air in the cold-storage chamber has without doubt an important bearing on this point. Eggs are generally placed in cold storage in April and the early part of May. If placed in storage later than this time they do not keep well. They are seldom kept in storage longer than a year. Eggs which have been stored at a temperature of 30° must be used soon after removal from storage, while those stored at 35° to 40° will keep for a considerable time after removal from storage, and are said to have the flavor of fresh eggs. The author cited states that eggs for market, especially those designed for cold storage, should not be washed. Stored eggs should be turned at least twice a week, to prevent the yolk from adhering to the shell.

Eggs are sometimes removed from the shells and stored in bulk, usually on a commercial scale, in cans containing about fifty pounds each. The temperature recommended is about 30° F., or a little below freezing, and it is said they will keep any desired length of time. They must be used soon after they have been removed from storage and have been thawed.

**EXCLUDING MICROBES.**—The substances suggested and the methods tried for excluding air conveying micro-organisms to the egg, and for killing those already present, are very numerous. An old domestic method is to pack the eggs in oats or bran. Another, which has always had many advocates, consists in covering the eggs with lime water, which may or may not contain salt. The results obtained by such methods are not by any means uniform. Sometimes the eggs remain fresh and of good flavor, and at other times they spoil. Recently in Germany twenty methods of preserving eggs were tested. The eggs were kept for eight months with the following results: Those preserved in salt water, i. e., brine, were all bad, not rotten, but unpalatable, the salt having penetrated the eggs. Of the eggs preserved by wrapping in paper, 80% were bad; the same proportion of those preserved in a solution of salicylic acid and glycerine were unfit for use. Seventy per cent of the eggs rubbed with salt were bad, and the same proportion of those preserved by packing in bran, or covered with paraffine or varnished with a solution of glycerine and salicylic acid. Of the eggs sterilized by placing in boiling water for twelve to

fifteen seconds, 50% were bad. One-half of those treated with a solution of alum or put in a solution of salicylic acid were also bad. Forty per cent of the eggs varnished with water glass, collodion or shellac were spoiled. Twenty per cent of the eggs packed in peat dust were unfit for use, the same percentage of those preserved in wood ashes, or treated with a solution of boric acid and water glass, or with a solution of permanganate of potash, were also bad. Some of the eggs were varnished with vaseline; these were all good, as were those preserved in lime water or in a solution of water glass. Of the last three methods, preservation in a solution of water glass is especially recommended, since varnishing the eggs with vaseline is time consuming, and treatment with lime water sometimes communicates to the eggs a disagreeable odor and taste.

Many of these methods have been tested at the agricultural experiment stations in this and other countries. The Canada station found that infertile eggs kept much better than fertile eggs when packed in bran. In view of the fact that preservation in brine has been said to injure the eggs by giving them an unpleasant, salty taste, experiments were recently made at Berlin University to learn the proportion of salt which entered the eggs when placed in brine of varying strength. It was found by the investigator that with a saturated or half-saturated solution, the salt entered the eggs at first very quickly, and later much more slowly. After remaining four days in the saturated solution, an egg contained as much salt as one which remained four to six weeks in a 1% to 3% solution. If kept in the saturated solution four to six weeks, 1.1% was found in the yolk and 1.5% in the white of the eggs. None of the eggs tested were spoiled. When a 1% to 5% solution was used, the eggs kept well for four weeks and did not have a salty flavor. These instances are sufficient to show that any given method will give different results in different hands, and this is not surprising, since the eggs used are not always uniformly fresh, nor is it at all certain that other experimental conditions are uniform.

**THE WATER-GLASS METHOD.**—In the last two or three years the method of preserving eggs with a solution of water glass has been often tested, both in a practical way and in laboratories. The North Dakota Experiment Station has been especially interested in the problem. In these experiments a 10% solution of water glass preserved eggs so effectually that "at the end of 3½ months eggs that were preserved the first part of August still appeared to be perfectly fresh. In most packed eggs, after a little time, the yolk settles to one side, and the egg is then inferior in quality. In eggs preserved for 3½ months in water glass, the yolk retained its normal position in the egg, and in taste they were not to be distinguished from fresh store eggs. Again, most packed eggs will not beat up well for cake making or frosting, while eggs from a water-glass solution seemed quite equal to the average fresh eggs of the market."

Water glass or soluble glass is the popular name for potassium silicate or for sodium silicate, the commercial article often being a mixture of the two. The commercial water glass is used for preserving eggs, as it is much cheaper than the chemically pure article which is required for many scientific purposes. Water glass is commonly sold in two forms—a syrup-thick liquid, of about the consistency of molasses, and a powder. The thick syrup, the form perhaps most usually seen, is sometimes sold wholesale as low as 1½ cents per pound in carboy lots. The retail price varies, though 10 cents per pound, according to the North Dakota Experiment Station, seems to be the price commonly asked. According to the results obtained at this station, a solution of the desired strength for preserving eggs may be made by dissolving one part of the syrup-thick water glass in ten parts, by measure, of water. If the water-glass powder is used, less is required for a given quantity of water. Much of the water glass offered for sale is very alkaline. Such material should not be used, as the eggs preserved in it will not keep well. Only pure water should be used in making the solution, and it is best to boil it and cool it before mixing with the water glass. The solution should be carefully poured over the eggs packed in a suitable vessel, which must be clean and sweet, and if wooden kegs or barrels are used they should be thoroughly scalded before packing the eggs in them. The packed eggs should be stored in a cool place. If they are placed where it is too warm silicate deposits on the shell and the egg does not keep well. The North Dakota Experiment Station found it best not to wash the eggs before packing, as this removes the natural mucilaginous coating on the outside of the shell. The station states that one gallon of the solution is sufficient for fifty dozen eggs, if they are properly packed.

It is, perhaps, too much to expect that eggs packed in any way will be just as satisfactory for table use as the fresh article. The opinion seems to be, however, that those preserved in water glass are superior to most of those preserved otherwise. The shells of eggs preserved in water glass are apt to crack in boiling. It is stated that this may be prevented by puncturing the blunt end of the egg with a pin before putting it into the water.

## THE FIELD.

### Watermelon Growing in Sonoma County.

During the last few years the watermelon scepter has passed from the Lodi growers and several districts are dividing the eminence which the Lodi region at one time almost monopolized for the central California trade. The southern parts of the great valley are now doing more and coast valleys are also notably intruding. The Santa Rosa Republican has a very interesting sketch of the development in a very fine district of Sonoma county.

**THE MARK WEST SECTION.**—An industry of Sonoma county dating its beginning back only a few years, but which in proportion to the area devoted to it ranks first in returns, is that of melon growing. Three or four years ago a tract of some ten acres in the Mark West section was taken up with the culture of this vegetable, and the whole harvest was sold in the streets of Santa Rosa and other neighboring towns. The experiment proved a success. More land was added to that already under cultivation and others were quick to take advantage of the opportunity to turn in money rapidly. In 1900, instead of two or three growers of a few acres, there were a dozen men engaged in raising melons, and these cultivated 250 acres. Fifty carloads were shipped from Fulton to the San Francisco market, besides large quantities sold locally. The return was \$100 per carload. Thus, it will be seen, quite a handsome sum was realized.

The section devoted to melon culture this year extends along Mark West creek to the bridge, over toward the Fulton road and around the Coffey settlement, or Mark West valley. There is also a small tract north of Fulton. The leading growers are: The Maddux brothers, who have about ninety acres, mostly along the creek; Tuttle & Finley, who own eighty acres in the same section; Simon A. Coffey, seventy acres, chiefly on the Meacham tract; Will Coffey, sixteen acres; S. Gibbens, eighteen acres; Thomas Forsyth, thirty acres; George Abel, eight acres; Ben Hickok, twelve acres, and other small growers swell the total to about 350 acres.

**CROP AND PROFITS.**—As to returns to the acre, last season George Abel sold \$450 worth of melons off of six acres. O. M. Tuttle shipped eighteen carloads off thirty-five acres. Jeff Maddux shipped about the same quantity.

All the growers have fine looking vines this year, but the late spring has kept the plants back. The yield to the acre will consequently be less than last year, but the greater acreage will more than compensate. Representatives of San Francisco dealers have already been up, seeking to contract for crops, but so far none have been sold. There is a better demand in the San Francisco market for Mark West melons than for those grown in any other part of the State. The soil in this section is especially adapted to growing large, sweet watermelons.

**HOW TO GROW THEM.**—While the men engaged in this business get large returns, it must not be forgotten that the labor incident to a good harvest is very hard, and that chance is an element largely involved. The longer the season, i. e., the time from seeding to first frost, the greater the harvest. But if the seed be sown too early, while the soil is not yet warm, the young plants are attacked by insects and sometimes totally destroyed. Last year O. M. Tuttle was obliged to sow some ground four times before getting a stand. Again, large melons are, generally speaking, in better demand, and so command better prices, than small ones, but if the vines be too close the melons will be small. On the other hand, large melons are harder to handle than small ones. The plants thrive best in good, light soil. If grown in soil that is damp or too rich, they will grow large but rank. Thus good judgment and a knowledge of the kind of soil required are essential. The varieties grown for shipment are the Cuban Queen and Rattlesnake. William Kenley raises the Kenley and Red-seed, both of which are more prolific than the former, but will not stand shipment.

Melons are usually planted along from the 10th to the 20th of April, and are harvested from the middle of August to the middle of October, or later. After the first frost watermelons are no longer marketable. The fields must be cultivated at least four times during the season. Like all other crops, melons exhaust the soil if grown on the same land year after year. Three years on one field is the longest period that will give a satisfactory yield. Some of the growers alternate with wheat and get a good crop of cereal one year and a fine harvest of melons the next.

Harvesting is about the hardest work connected with melon growing. To gather, in one day, a carload of melons weighing from fifteen to forty pounds each, load them on wagons and then transfer to a car requires a great deal of labor. The melons are not boxed or sacked, so that each one must be handled separately, and handled so as not to injure the rind. Then, the producer must take chances on the demand and price. As with the other industries of California—or any other country, for that matter—successful melon culture requires two things, brains and hard work.



## Agricultural Review.

### ALAMEDA.

**APRICOTS NOW MOVING.**—Niles Herald, July 12: The E. A. Ellsworth drier is a busy place, as about 1000 boxes of apricots are being handled daily. There are about 165 people at work on the grounds, all told, and the first shipment of dried fruit was made yesterday to the city. The first local 'cots came in this week and proved to be of very fine quality and size. The C. B. Overaker, William Barry and Ellsworth crops are being cured in this drier. The movement of 'cots to the canneries began Monday. The price ranges from \$25 to \$30 for 'cots at eight, ten and twelve to the pound. The average is \$27.50 per ton.

### AMADOR.

**FLIES SAID TO KILL A STEER.**—Ione Valley Record: A gentleman came in from near the Swift ranch the other day bearing a rather strange tale. He says that while riding on the grant he noticed a fine fat steer fighting a horde of flies. The beast seemed to be in great agony, bellowing and roaring and pawing the earth in a wild exertion to rid himself of his pesky tormentors. Desirous of knowing the outcome, he visited the place the next day and there saw the steer in the throes of death, surrounded by thousands of the common fly, and it died in a short time.

### BUTTE.

**RATS EAT ORANGES.**—Oroville Register: The Oroville oranges are so sweet that the rats are fond of them and will eat out the center of an orange whenever an opportunity is presented. At the home of C. Gray they climb the house, run across the roof and jump from the edge of the porch roof to an orange tree where they eat their fill of the fruit. At the home of Judge Lott a rat was lately seen walking a telephone wire from the house to an orange tree. The following evening the Judge watched for the rat and thought he could knock him down with a pole and let the dog kill the rodent. When half way across the pole was brought into use, but the rat saw the danger and turning quickly on the slender wire he made his way back to a place of security.

**PARADISE FRUIT CROP.**—Oroville Register: Henry Bushman, speaking of fruit in Paradise locality, said the prune crop was shorter this year than usual. He thought it was because the trees bore so heavily last season. The apple crop would be fair, while the peach crop would be very fine.

### DEL NORTE.

**CUTWORMS.**—Crescent City News: Cutworms are making their advent in Del Norte county. Crops of various kinds, including peas, corn, beets, etc., were total failures last season in this county, as well as in other portions of the State and in Oregon, having been completely devastated by the pests.

### HUMBOLDT.

**FINE BERRIES.**—Arcata Union: James Eglos of Arcata can easily pride himself upon having probably the finest strawberry patch in Humboldt county—not in lateral area, but in the quality and size of the berries produced. The berries are of the Nick Omer, Brandywine and Excelsior varieties, and, in addition to their wonderful size, are of excellent quality. Three berries of the Brandywine variety were cured in alcohol, each being as large around as the palm of the hand, and the three completely filled the pint fruit jar.

### KINGS.

**BIG JOB OF HAYING.**—Hanford Sentinel: D. M. Stewart has a big job of haying on hand and the work on the ranch was begun April 16th last, since which time a force of from twelve to sixteen men, with the necessary machinery, has been very busy, and to date fully 1000 tons has been placed in the stack. The hay is alfalfa and grows on about 300 acres. The harvest will be finished about October 1st, when that meadow will have produced this season upwards of 2000 tons.

**SALE OF FINE HORSES.**—Hanford Sentinel, July 11: The finest carload of horses that has been shipped out of Hanford for many months went to San Francisco Monday, where they will be transferred to the vessels and finally landed in Guatemala for the United States government. George Wolf purchased the horses of W. J. Newport for C. H. Bellina, and the entire lot of eighteen will average 1600 pounds apiece. They are all bays or very dark browns and in excellent condition. The sum of \$2300 was realized by Mr. Newport for the entire bunch.

### LOS ANGELES.

**BIG STRAWBERRY ON SMALL BUSH.**—Los Angeles Times: At the Chamber of Commerce there is on exhibition a large, red strawberry, with a full-fledged straw-

berry plant of three branches and nine leaves, growing from its side. The plant is about 1 inch in height.

**BIG SALE OF TREES.**—Ontario Record-Observer, July 12: R. M. Teague, proprietor of the San Dimas Nurseries, recently received orders from Washington for the shipment of orange trees to Mare Island, from which place they will be sent to one of Uncle Sam's naval stations in the Pacific. The demand for citrus trees this season has been very good. Mr. Teague states that from a stock of 50,000 choice citrus trees, only about 3000 remain, which are now offered for sale at extremely low prices. The reduction in price ought to be a strong incentive to plant to parties who have held back planting on account of high prices, or who want to replace missing trees in their orchards. Mr. Teague says he will have 100,000 choice citrus trees for planting in 1902, and that contracts are being taken for delivery next year.

### MONTEREY.

**GRAIN FIELD FIRE.**—Salinas Index, July 11: News of a most destructive grain fire reached here yesterday. A spark from the northbound train, just before reaching Gonzales, set fire to some standing grain on the H. Orio ranch and spread with great rapidity to the ranches of Chris Asmussen and Mrs. Ramelli. Hundreds of willing hands were fighting the flames, which were subdued as they reached the V. Tavernetti place. The loss is estimated at between \$4000 and \$4500, which is fully covered by insurance.

**HORSES ON A RAMPAGE.**—Salinas Index, July 11: A year or so ago, when the war with China was on, the German Government purchased a large number of horses in California for cavalry purposes. Subsequently hostilities in China ceased and the Kaiser had no use for the horses purchased here. A large band of the animals were placed on pasture on the San Francisco ranch below Monterey. They were wild, most of them never having been even halter broken. Some of them were sold at auction here, bringing from \$10 to \$15 a head. Tuesday afternoon about 500 of the horses were driven into Monterey to be shipped away on the cars. Breaking away from the vaqueros in charge, the wild horses stampeded in all directions, cavorting through the streets and a portion of them racing up through the Del Monte grounds, where they did considerable damage to the flower beds before they were corralled. As a vaquero named Jose Torres was chasing them, the horse he was riding leaped into an old well which had been dug near the Del Monte gas house. Fortunately there was no water in the well, and, wonderful to relate, neither horse nor rider was injured in the plunge to the bottom.

**TWENTY GALLONS OF LADYBUGS.**—Salinas Index: George R. Rowe and H. Hetherington of Watsonville drove in from Tascajara Hot Springs and brought with them the strangest load of freight ever brought to this city—twenty gallons of live ladybugs, contained in a five-gallon coal oil can, a box about the same size and the remainder in grain sacks. They were caught on the banks of a stream in the mountains near the springs, and will be turned loose in the Pajaro valley orchards to clear the trees of wooly aphis. The bugs are placed on one side of an orchard and they never let up until the aphis nest is cleaned from every tree. The destroyers then go on until they find another orchard, as the aphis is their favorite food. There are about 10,000 ladybugs in a quart, consequently there are about 800,000 in the twenty gallons now in possession of Rowe and Hetherington. The market price of the bugs is 50 cents a thousand, making the lot worth \$400, although suddenly dumping so large a quantity is likely to bear the market. Rowe and Hetherington say there are plenty more bugs where they got theirs. They can be scraped up from the ground by the handful.

### RIVERSIDE.

**SUGAR BEETS A SUCCESS.**—Perris Progress: The sugar beets planted in early spring at Ethanac have been tested at the factory. The result was 14% saccharine matter and 83% purity. The beets have recently been irrigated, and will ripen on or about Aug. 1. Those tested weigh about a pound each. When they ripen and are ready for harvest the percentage of sugar will be considerably more. The beets are now so large that a good tonnage is assured, many weighing two pounds or more each. The basis of the new prosperity and influx of capital is the ample underground water supply. Growing sugar beets in dry soil without irrigation has become a very unpopular business in other parts of southern California. Sugar factories and beet growers now seek land with an abundant water supply.

### SAN JOAQUIN.

**SHIPPING TONS OF APRICOTS.**—Lodi

Sentinel, July 11: Dried apricots are being sacked at a lively rate in Mason Bros.' warehouse. Much of the fruit will be shipped at once to fill contracts, but a considerable quantity will be held as a reserve until the chance offers for a good sale at fancy figures. Two grades are being handled. To an ordinary observer there seemed but little difference in the fruit, but the men accustomed to sorting it could tell at a glance why one was first class and the other second class. The dried fruit is put into 95-pound bags and is then ready for shipping.

**OVER TWO THOUSAND ACRES OF GRAIN BURNED.**—TRACY, July 12: The most serious grain fire in this section for years occurred to-day. A spark from the locomotive of a passing freight train near Bethany started a fire in the Naglee Burke tract that burned over 2000 acres. Combined harvesters at work narrowly escaped. Carl Walters is the heaviest loser. His loss is over 7000 sacks, no insurance. Antone Pierson and J. B. Root are also heavy losers.

### SANTA CRUZ.

**APPLE CROP SELLS AT \$20 PER TON.**—Watsonville Pajaronian, July 11: Geo. W. Rowe has sold the apple crop of his orchard in Railroad district (the Coward orchard) to Porter Bros. Co. for a flat price of \$20 per ton delivered at the company's packing house at Watsonville depot. All grades are included. Mr. Rowe is to care for the orchard, pick the fruit and pack in orchard boxes, and haul it to town. His apple orchard is one of the largest and among the best in California, and the character of its fruit has always been excellent. This sale is, we believe, the opening of a new method for handling the crops of large orchards, and the trial will be watched with considerable interest. Heretofore weight purchases have been made, but almost exclusively with small growers. Mr. Rowe asked and was offered close to \$5000 for his crop, and he believes that his large crop will net him considerably above that sum.

### SOLANO.

**FATTENING HOGS ON FRUIT REFUSE.**—Vacaville Reporter: Mr. Gates is one of those orchardists who believes in utilizing the waste fruit and cuttings, and to that end has a drove of young hogs that are thriving splendidly upon the refuse. They are placed in the bed of the creek in the orchard, and a trough runs down the bank of the creek, into which the fruit is dumped. Not a penny has been spent for feed, and a healthier lot of hogs we never saw. Feeding them is really a saving, as it eliminates the cost of hauling away the fruit they are fed.

**HEAVY SHIPMENTS OF VEGETABLES.**—Vacaville Reporter, July 13: Vegetables have done well this year, and the market has held up good even under heavy shipments. Vacaville is certainly in the minds of the San Francisco commission men, for there has not been a report issued this year that has not had more or less to say about the probable consignments from Vaca valley. Hartley Bros., from the ranch of Mrs. E. M. Hartley, sent full carloads of vegetables for nine consecutive days to San Francisco, and since that time have continued with many large shipments daily.

**PEST THAT RESEMBLES THE TEXAS FLY.**—Solano Republican: Dairymen throughout Marin county, particularly in the vicinity of Olema and Point Reyes, are greatly exercised over the appearance in large numbers of a small fly, similar to the Texas fly, which threatens to commit serious depredations among the cattle. Already a number of calves have succumbed to the bites of this pest. The fly is described as a small hard insect which burrows down into the hair and bites, viciously. It seems impossible to crush it, as a severe blow of the hand has no effect. Although this species of fly made its appearance two years ago, it was not in sufficient numbers to cause the alarm which is felt this year.

**A NEW VARIETY OF PLUM.**—Vacaville Reporter, July 13: Oscar Garlich has a new variety of plum which for uniform size and selling quality is a wonder. The plum, which is from two-year-old grafts, is a native of Japan and resembles a banana greatly in taste, while in general appearance it is not unlike the Wickson plum. A good sized shipment, which reached Chicago Wednesday, sold for \$2.95 a crate, a very high price when the fact that this is the middle of the season is considered. The fruit is of such size that three plums can be packed each way in a basket and only two deep. Even then 4½-inch crates have to be made with cleats to allow room for the fruit. Mr. Garlich has about 300 trees of these plums and from 150 of them has picked over 150 crates this year.

### SONOMA.

**A RUNAWAY TEAM CAUSES SERIOUS**

**ACCIDENT.**—Woodland Mail: W. R. Hatcher met with a painful and perhaps fatal accident near Windsor Monday morning while hauling hay. His team ran away and the wagon, heavily loaded, was precipitated upon him. His right ear was torn from his head, his face badly disfigured, and he probably suffered internal injuries.

### TEHAMA.

**WIND CAUSED 50% LOSS.**—Red Bluff News, July 12: P. C. Crumbaugh is threshing his crop of wheat. The yield is not very satisfactory, as it is going only seven or eight sacks to the acre. He lost heavily by the north wind, which threshed out probably 50% of the grain. He planted last year a wheat called the blue stem, that produces well in Washington, but which will not stand the north wind any better than Golden Gate Club. Hereafter Mr. Crumbaugh will give his attention more to stock raising than to farming.

**HARVESTER TEAM RUNS AWAY.**—Red Bluff News: A root about 2½ inches thick found its way into the cylinder of a harvester engaged in cutting grain on the Casale ranch, and the racket it made inside the cylinder case frightened the twenty-six head of mules, causing them to run away with the big machine. No one was hurt, nor were any of the animals, but the machinery was more or less damaged and work had to be knocked off. Mr. Casale has been very fortunate with his harvester teams, for during the nine years that he has used them this was the first runaway where any particular damage was done.

**THE FUTURE ORCHARD.**—Red Bluff People's Cause: The statistics at the assessor's office on tree growing show that the orchards of this county in the future will be composed mostly of peach and olive trees. The olive tree has not yet been fully tried, but it is believed that it will do well. The peach has been found to be a more certain bearer than the prune, and the latter is giving way to it. The statistics show the number of young peach trees coming on to be 131,130, and the number of young olives 87,472. The young prune trees coming on are only 17,550, which shows they are not in such favor as they were a few years ago.

### VENTURA.

**MARKET FOR APRICOT PITS.**—A Ventura dispatch states that the apricot pits this season will yield a neat sum to the growers who dry their fruit. Buyers are now offering \$10 per ton for the pits, delivered at the Southern Pacific Milling Co.'s warehouse in Ventura. A few years ago the pits were usually thrown away, but some persons used them for fuel. Each year they became more valuable. Two years ago they sold for \$5 a ton; last season the price advanced to \$7 per ton. A machine for removing the kernel will be operated at the warehouse after the apricot season closes. Prussic acid will be made from them.

**BEES' INSTINCT.**—Nordhoff Ojai: A few days ago a strange object was found in one of the Kelly hives. It appeared to be a great piece of wax, but why the bees should have spent so much energy in making the wax when there was honey to gather was a mystery, until the object was removed from the hive, and on investigation was found to be a dead rat incased in a coat of wax. The rat, straying into the hive, was stung to death, but the bees were unable to move the body. To make its presence less offensive, the little workers spent the night in building the rat a coffin of wax, coating it from head to tail. It is considered to be one of the most rare cases of bee instinct on record.

### YOLO.

**APRICOT PITS ADVANCING.**—Winters Express, July 12: Apricot pits are growing in value as the days go by. The latest top price we have heard is \$13, but there's no telling what the price is to-day. Just think of the thousands of tons of pits that have been burned for fuel in the years that have passed. It's enough to make the fruit grower sick at the pocket book.

### YUBA.

**WHEAT YIELD NOT UP TO ANTICIPATIONS.**—Marysville Democrat, July 12: Harvesting in this vicinity is now well along—in fact, it is estimated that about one-half the acreage has been gathered. As a general rule, the yield of the wheat is not up to expectation in quantity, while the quality is quite satisfactory. An interview with several farmers establishes the fact that eight or nine sacks per acre is about the average yield, though there are some fields that exceed this. Eugene Summy has just completed harvesting a field of seventy acres near Sutter City, which produced an average of a trifle more than eighteen sacks per acre, while other fields in the same vicinity are yielding less than six sacks. The barley crop has proven fully up to expectations, both as to quality and quantity.



## THE HOME CIRCLE.

### Sweet Girl Graduate.

Standing alone on the banks of the river  
Where, as the poet says, childhood's  
days flee,  
Dreamily gazing far into the future,  
Lazily musing on things that shall be!

Slender and tall in your womanhood's  
beauty,  
Fair as a flower, and pure as a dove,  
Wistfully gazing away in the distance,  
Looking and longing for something to  
love!

Who would not love such a fair, winsome  
creature!  
Bright with the glories of childhood's  
fair days,  
Dreaming of life as the fairest of pictures,  
Giving no heed to its long, weary maze?

Maiden, half woman, half child in your  
beauty,  
Keep your pure heart in this world's  
toil and strife,  
Heed not the voice of the million who  
seek you,  
Keep 'midst the flowers that perfume  
this life.

Dreamy brown eyes looking out on the  
waters,  
Sweet, rosy lips faintly stirred by a  
smile,  
Tender heart dreaming of joys in the  
future,  
Tender soul, fair and unspotted by  
guile—

O may the sunbeams forever rest with  
you,  
Linger around you as brightly as now,  
Chasing all sorrow away from your  
bosom,  
Keeping the storm-clouds afar from  
your brow.

Standing alone on the banks of the river  
Watching your childhood's days go  
with the stream,  
May all the years of your womanhood's  
glory,  
Pass just as brightly as that vanished  
dream.

—Eva M. Niles, in Transcript.

### A Pair of Vagabonds.

I first met the old man and his dog in a red-hot melodrama, in which Alcibiades, as the dog was called, and his master were engaged for a kind of a specialty part.

It was a shockingly ridiculous piece, badly put on the stage and villainously acted—I was manager myself and I played the chief part, so I ought to know—but there was one item in our entertainment which was worth all the money charged at the door. I mean the performance given by old Billy Ecclestone and his dog.

The part supported by Billy Ecclestone was that of a drunken, lazy, kindly old vagabond, who supported himself by means of a performing dog. There was no necessity for him to act, as all that was required was for him to act naturally. As the author said at rehearsal: "Don't try to be more of a vagabond than you really are, Billy. You'll overdo it."

So Billy loafed on the stage just as he did in the public house bar—the dog did the rest.

You talk about acting—I only wish you could have seen this dog. That animal combined the intelligence of a senior wrangler with the smug hypocrisy of a Chadband. He could look miserable and half starved, walk dead lame, and go blind one minute, and the next time you met him he would be going through a long and complicated performance with unnatural activity and dash.

I suppose the shifty, roving life had weakened the dog's moral nature; but I can only say that he rose to the heights of deception which I thought were only possible to human beings. He would "shoulder arms," "march to war" and "die for his country" in the presence of a district visiting old woman with such a chaste air of pious resignation that I have seen tears trickling down the spectators' cheeks. In some curious way that abandoned old dog could suggest holy martyrdom combined with a desire for social reform just when he liked.

I remember seeing an old woman so

impressed by the dog's air of noble patience that she gave old Billy sixpence, and groped blindly in her bag for a biscuit for the dog. Whether she was so overcome with emotion that she didn't notice what she was doing I can't say, but instead of producing a biscuit she handed the animal a temperance tract, entitled "Shall I Get Drunk To-night?"

The dog rose to the occasion superbly. To be sure, when she groped in her bag there was a slightly worldly look in his eyes, which reminded me of the expression on a parson's face when the plate is being carried around; but when the tract was produced the old missionary expression returned, and, with a glance at the heading, he carried it to his master and wagged his tail.

I regret to add that as soon as the old woman's back was turned Alcibiades led the way to the public house.

But when Alcibiades went through his performance in a music hall his manners were quite different. The look of noble resignation gave way to one of reckless and diabolical enjoyment. There was a sly twinkle in his eye that suggested comic songs with double meanings, and he seemed to be on the point of telling a yarn compared with which a French farce would be innocent and pure.

I am confident that if the abandoned expression on that dog's face had once caught the attention of the County Council they would have refused to renew the license of every hall where he appeared.

Several years elapsed since the breaking-up of our provincial melodrama and my next encounter with Billy and his dog. I believe they rubbed along in their usual fashion. Alcibiades was a dog of some resource. When things were very bad he was capable of abstracting a piece of meat from the butcher's shop and bringing it in triumph to Billy's lodgings. His master would then gravely reprove the dog and cook the meat.

Once Billy sold him to a young dog trainer who thought Alcibiades would exercise a good moral influence over his younger pupils. The price agreed upon was £5, but within a week Billy bought the old sinner back for twenty shillings, the reason being that Alcibiades not only obstinately refused to perform tricks of any kind for a stranger, but displayed his annoyance at things in general by killing a valuable fox terrier.

I came across them again at Brighton. Billy and his dog were giving brief performances on the beach. They both looked somewhat older, and a little wicked. Poor old Billy was going down hill rapidly. Strange as it may sound, he was a man of high education, and had once held a good appointment as master in a public school. The downfall had been brought about by the usual causes, and now he had degenerated into a thorough vagabond.

It was a rather pitiable spectacle to see the good-natured, weak old fellow and his dog going through the same tricks; Alcibiades looking as pious and vigilant as ever, but a little more ragged, and a trifle stiff in the joints.

But it was here that Alcibiades put the finishing touch to a remarkable career. It was a crowning stroke of diplomacy and sagacity, for which at least three people owe him an everlasting debt of gratitude.

It happened that at that time I was working very hard to win the affections of a certain young woman, who weighed me in the balance with a judicial exactness which was rather exasperating.

However, we had at least one common peculiarity—a profound respect for dogs—and when I told her of Alcibiades and his master, who were then performing on the beach; and how, at one time, I had been their comrade and companion, she was delighted. I had rather feared that her fastidious little mind might have been shocked at the notion of my having once been intimate with such a pair of vagabonds, but, on the contrary, she was rather pleased. I think she considered

it a great honor for any man to be intimate with such a dog as Alcibiades.

When we arrived on the scene Alcibiades was extremely busy balancing a Japanese umbrella on the end of his nose. He winked at me, and dropped the umbrella, but redeemed his reputation by playing a concertina. As soon as old Billy saw I had arrived, and was accompanied by a young lady, he judged it was a favorable moment to take up a collection. So Alcibiades was sent round with a tin mug, while his master gave a pathetic recitation about his "grandchild's doll."

I may mention that Alcibiades could take up a collection in a way that would put many church wardens to shame. There was no escaping him. In fact, if you seriously tried to avoid him, he sniffed the calves of your legs in a way which would excite liberality in a miser.

But, to my surprise, he took comparatively little notice of me, and passed on to Miss Woodhurst, and made as much fuss over her as if she had been a friend of the family. I was sorry, because she was just the kind of a girl to lose her head if a dog took any notice of her.

But Alcibiades behaved in a most eccentric fashion, for he seemed to abandon the sacred task of collecting, and ran back to old Billy, with his stump of a tail quivering with emotion.

The old man gave me a grin of welcome, and glanced at the girl by my side. To my amazement he stopped dead short in his recitation and blushed. Yes! his weather-beaten, grizzled old face actually turned scarlet. Miss Woodhurst appeared to be sublimely unconscious of what was going on, her attention being entirely occupied by the dog, whom she seemed to regard as a being of a higher sphere.

"Isn't he a dear old thing?" she whispered in an awe-stricken voice. "I should like to buy him."

"If you buy the dog you'll have to take the old man, too," I remarked. "You can't have one without the other."

"Oh! I don't want the old man," she said, glancing with a little shrug of horror at old Billy.

I think it must have been the first time she had looked at him, for a flash of half-puzzled recognition came into her eyes, and a scarlet patch appeared on each cheek as she glanced from the old man to the dog and then back again.

Then she turned away quickly, and walked toward home, and, of course, I followed submissively.

"What is the name of that dog?" she said, presently, making a great effort to speak naturally.

"They call him Alcibiades," I said, speaking lightly, to help her regain her composure. "He's old in sin and in years."

"And—and the old man?" she said. "Ecclestone—familiarly, Billy—a very good old boy, too, in spite of his faults."

"He happens to be my father," she said.

This was rather a shock, but of course I evinced no surprise, but received the news as if it were quite natural for a well-dressed young lady, living on The Drive, to have a father who ran a performing dog show on the beach.

"I—I am rather upset about it," she faltered.

"I think you ought to be very glad to find him," I ventured.

"I am glad to hear you say that," she whispered. "I was afraid you would think the opposite. Will you help me? What ought I to do?"

It appeared that her mother had died when she was six years of age, and from that time until she was eleven her father neglected her so shamefully that at last her mother's brother interfered and took her away. She could vaguely recollect her father buying Alcibiades as a pup. The old man was then going down hill fast, and had practically lost all self-respect. She had never seen him again after her uncle took her away, and old Billy had made no effort to seek her out.

But she was now free. Her uncle had

died and left her well provided for, and she was anxious to do the right thing by the old man, and, in fact, more than the right thing. She was living with a maiden aunt, the only other relative she had in the world, but she would like to be a real daughter to the old man, if I could suggest any way of bringing it about.

Now, it struck me that this was not quite so impossible as one might suppose. Like most weak people, old Billy was amenable to influence, and I had long since found that I could do almost what I liked with him.

So, without telling Miss Woodhurst anything of my intention, I sought the old vagabond out that night at his lodgings, and arrived just in time to prevent a drinking bout.

After giving him a good shaking up, morally and physically, a proceeding which rather puzzled Alcibiades, who hadly knew whether to applaud my efforts or lay hold of my leg, I proceeded to sound him on the subject of his daughter.

Now, there was one redeeming feature in old Billy's character—he was not exactly a cadger—and when, in order to see how he would take it, I suggested that he should ask his daughter for help, he rejected the notion with scorn.

"No, my boy," he said, bitterly, "I treated the girl badly, and I'm not going to blackmail her and be a beastly nuisance. To-morrow morning the dog and I will be up and off, and get out of her way. And so it will go on until the old dog dies—it won't be long now, for he's very old—and then I shall go to the workhouse, and no one will be a penny the worse."

Then I approached the matter in a different spirit, and told him that the girl wanted a father just as badly as he wanted a home, and that he would have to shake off his vagabond ways and be a man.

Finally, I took him into town and had him groomed down and decently clothed, and the change was so remarkable that, when we three—Billy, the dog and myself—walked along the Parade the next morning, no one would have recognized the old showman.

It was a great occasion, for we met a certain dignified, self-possessed little lady, who put her dignity and self-possession on one side, and, greatly to the amazement of a large and fashionable crowd, put her arms around the old sinner's neck and kissed him.

Then she welcomed Alcibiades, who, with his usual sagacity, had remembered her from his puppyhood.

Finally, she turned to me, and—well, no, she didn't say anything, but there was a certain look in her eyes which I had never seen in the eyes of any woman before during the five and thirty years I had been knocking about in the world.

And I have only one more remark to add about Alcibiades, the wily—since that moment he has never performed a trick. No coaxing or persuading will induce that cunning old rascal to die for his country, or even accept a cake on trust. He seems to quite understand that he has retired from the profession, and like a wise dog he declines to appear as an amateur.—Black and White.

### Cuts.

When there has been a real cut, with profuse bleeding, plunge the part in as hot water as can be borne, says Dr. Julia Holmes Smith in the Ledger, and then take a bit of absolutely clean cotton or linen, place upon it a little vaseline or lard, even, and hold the edges of the wound together and bind it as tightly as possible. Thus the office of the court plaster or adhesive plaster is replaced by what is certainly to be found in every farmer's family. I have known good results to be obtained from binding upon cuts spiders' webs, to be found in every attic.

TEACHER—If you are kind and polite to your young comrades what will be the result?

Bully Jones—They'll know they can lick you.



## A Gigantic Beehive.

Texas is a State of such magnitude and of so many wonders that one is scarcely surprised to read in the July St. Nicholas of a natural beehive there, in which tons of honey are stored.

One of the most wonderful spots in the world, in its way, says Dr. Eugene Murry-Aaron, is the famous "Devil's Punch Bowl," as the natives prefer to call it, in Valverde county, Texas, which borders the Rio Grande. Its discoverers noticed, as they came within a couple of miles, what appeared to be a cloud of smoke constantly rising from a spot in the valley below them, and when they came nearer they heard a rushing sound as of a great waterfall. It proved to be nothing more or less than a gigantic beehive, a hole in the ground forty feet in diameter, from which were rising and into which were descending innumerable swarms of bees. This, then, was the cause of the distant appearance of rising smoke, accompanied by a loud hum of countless insect wings.

Those who have ventured to visit this curious cave since its discovery, protecting themselves from the stings of the bees by mosquito netting or otherwise, as they look down into the yawning cavity, observe, clinging to its sides, great festoons of honeycomb. Opening into the large cavity can be seen many smaller ones which it is reasonable to suppose contain additional stores of honey in their dark recesses, for bees love darkness. If a method could be devised to secure the contents of this great treasure house of honey, several tons of the sweet product would be the probable outcome. But this cave, large and well filled as it is, contains but a small part of the honeyed treasure with which those valleys abound.

In that far southern latitude the winters are so mild that the bees can gather honey through the whole year. In the summer time they obtain it from the endless variety of flowers which bloom in those fertile valleys, and in the winter from cactus pears and berries of many sorts. The bees store the honey thus gathered in hollow trees and small clefts of rock, but chiefly caves, some of which are easily accessible, while others can be reached only by means of ropes let down from heights above. The country is so rough that the hunter must leave his pack pony or burro at a long distance, and must find his toilsome way on foot to the cave whence he hopes to obtain his honey. For this and other reasons, our bee farmers will have little cause to fear competition from the wild honey of that wonderful region, at least for many years to come.

It might be supposed that these bees of the Rio Grande could cease from their toil and feast themselves and their grubs on stores collected in former years. But a blind instinct prompts them to continue their labor as steadily as if they were entirely destitute.

How much in this respect they resemble men, who go on piling up wealth long after they have laid by enough to support themselves and families in comfort! So, though no fable, our story ends with a moral.

HOAX—You're a fine fellow!"

Joax—What's the matter?

Hoax—You've given your wife a \$25 bonnet.

Joax—Well, you don't have to pay for it.

Hoax—No; but I have to pay for another one just like it for my wife.

"WHAT would you say," began the voluble prophet of woe, "if I were to tell you that in a very short space of time all the rivers in this country would dry up?"

"I would say," replied the patient man, "Go thou, and do likewise."

SHE—Why is it, Cousin Bertie, that you always smile?

He—I haven't the least idea.

SHE—Yes; perhaps that is the reason.

## Roach and Bedbug Destroyers.

Herr Bernegau deserves the thanks of all housekeepers, and, in fact, of suffering humanity in general, for a long, exhaustive and exact inquiry recently made by him in regard to the real work and value of those substances hitherto recommended and generally believed to be efficacious as roach and bedbug destroyers. The results are somewhat surprising and disappointing to those who for years have spent money and time daubing the bedsteads, etc., with all the various bug killers, destroyers, eliminators, etc., of the market.

Herr Bernegau's method of investigation was very practical and certain. The bugs were caught and kept in glass tubes, so that the effects could be most closely watched. The following is a brief resume of the results: Best fresh insect powder made the bugs a little groggy for awhile, but they soon became as lively as ever, and seemed to experience no evil results from the powder. When mixed with ten per cent naphthaline a few of the bugs were killed, but results in general were poor. Various chemicals in powder form gave little better results. Hydrogen hyperoxide was a flat failure. Formalin acted well, but is too costly to be used, and, beside, it has unpleasant effects on those who apply it. Coal oil was deadly, but, aside from the unpleasant odor, there is the danger of fire, and so on through the line. If an article was efficient there was sure to be some counter indication to its use.

Finally Herr Bernegau tried turpentine oil, alone, and with naphthaline, and found at last the true roach and bedbug destroyer. The following are his directions for freeing a locality—barracks say, of the "terror that walketh in darkness."

All the furniture, the walls, the floor (the cracks and joints of which furnish favorite hiding places for the bugs), should be gone over with the turpentine oil and naphthaline applied with a brush. The application, by its penetrating odor, chases the insects out of their hiding places into the open, by the thousands. A little sprinkling of the oil is sufficient to kill these. Immediately after having done this, with a hot solution of carbolic soap (to 2½ gallons of boiling water, and a quart of liquid carbolic soap) wash the floors, baseboards, etc.

To prepare the turpentine oil and naphthaline, proceed as follows: Into a half-gallon jug pour a quart of oil of turpentine, add 150 grains of naphthaline, and set the jug in hot water, giving it several energetic shakes.

To prepare the carbolic acid soap, heat together equal parts of common yellow potash soap and of carbolic acid, until a clear solution is obtained.

After the turpentine and naphthaline have soaked into the walls, etc., the latter should be freshly painted or kalsomined.

SUITOR—I have come to ask you for your daughter's hand.

Father—Well, the fact is we are pretty well crowded here as it is, and I—

SUITOR—Oh, I intend to take her away from home if I marry her.

Father—Oh, well, in that case—

But you did give me an awful start, my boy.

A FASTIDIOUS young man complained that a pie a baker sold him was not up to sample. This irritated the baker and he said, severely:

"Young man, I made pies before you were born."

"Yes, I can believe that," replied the fellow, who was a wag, "for here is the evidence."

A dog once met a sausage. "Do you believe in reincarnation?" asked the dog. "Sure," replied the sausage; "in my previous existence I was a dog such as you."

Thus are both ends made to meet, when wurst comes to wurst."

## DOMESTIC ECONOMY.

## Ways for Canning Corn.

I venture to send my mode of canning corn, which I have used for twenty years with perfect success. Having tried many ways of putting it up with acid, and salt, and drying, all of which detract from the natural flavor, I settled on the following rule, and we have corn as sweet and fresh in the winter as when picked from the field: First, have perfect cans and new rubbers. I use Lightning pint cans, though Mason's are good. The corn must be taken when just right for eating and the milk can be pressed out easily. Select nice ears, and with a sharp knife cut from the cob, and jam or press in a pan till the milk runs freely from it. Then pack solid in your jars till the milk runs over the top. Put on the cover and, if a Lightning can, bring up the wire to hold on the cover, and if a Mason can give cover one turn. Proceed in this way as quickly as possible till you have enough cans to cover the bottom of the kettle or boiler you cook them in. I use a clean wash boiler and put narrow strips of lath or boards in the bottom to keep the jars from sitting on the bottom of the boiler. Fill the boiler with cold water up to within 3 inches of the top of the jars, bring to a boil and keep steadily boiling for four hours. As the water boils away fill up from a kettle of hot water near by. When they have boiled four hours remove and seal as quickly as possible by tightening the other wire, or screwing on top as tightly as possible. When cool, wrap each can in a newspaper and put away in a cold, dark place. Do not wash the outside of the cans before putting away, as the milk or juice that runs out forms a coating that helps to keep the air out. Corn is the hardest thing to can I have ever tried, and my experience has proved that the secret lies in your cans, rubbers, in having the corn in its prime age for eating, and, lastly, in boiling it as soon as possible after cutting from the cob, for if it stands a few hours after being cut from the cob it will ferment, and no amount of cooking will make it a success.—M. E. Benedict.

I have practiced canning corn for ten years and think our corn very nice. I will give my way of preparing and canning: Have the corn fresh picked in the morning, then proceed to husk and silk it. I take my cabbage cutter, set a little coarser than for cutting cabbage, then shave the tops from the kernels with cutter, and with a case knife scrape the cob to remove the remainder of the pulp from the kernel. This makes the corn nice and fine. I then fill this corn in the cans, packing as tight as possible and letting all surplus milk overrun the can onto a plate provided for the purpose. When the cans are all filled I make my boiler ready by putting in a pailful of water and then place a folded cloth in the bottom of the boiler. I have wire can holders made for the purpose, in which I set a can, place the cover of can on loosely and place in the boiler. If covers are screwed on tightly at first, as the corn heats they will pop off. When all the cans are placed in the boiler I fill in enough water to come 1 inch from the top of the cans, put the cover on the boiler, let come to a boil and boil slowly three hours. If boiled too hard they may overturn or get in some other trouble. When they have boiled three hours I take can rubbers and good covers, heat them thoroughly with boiling water, lift the can from the boiler, quickly remove the old cover, place the rubber and new cover on quickly as possible and tighten, then return to the boiler, and when all cans have covers tightened I boil them one hour longer. The corn may settle in the cans, so that the cans are not full when the covers are tightened, but I do not mind that, as it does not prevent its keeping, if the cans are properly tightened. I lay old covers on the cans at first, as I find that so much boiling was injurious to both tops and rubbers. When they have boiled the hour after tightening I remove from boiler, tighten again, if necessary, and consider them all right.

Since following this plan I have never lost a can.—Sibyl.

The first requisite is good corn. I have the Squantum variety, which ripens in September, and watch it to see when it is just right for the table. When that announcement is made, the day before I purpose canning I test eight jars to see if the covers screw on tightly, and always put on their new rubbers. The next morning I have nine dozen large ears of corn, all husked, brought in to me. After my morning work is over I split every kernel on the ears by passing a sharp knife through, cutting off the corn into a granite pan, and scraping the cob well. When full, I begin to pack the corn into the jars, pushing it down very hard with a potato masher. I get thirteen ears in each can. When ready I leave them on the kitchen until I get my dinner and finish my work. Then I put them into a boiler which I keep expressly for that purpose, which has a perforated board for the bottom, which fits exactly. To prevent their breaking by contact with each other, I stuff the husks between them. Then I proceed to make my fire of the best wood—I use nothing but hard wood. When it is burning bright and clear I fill the boiler with cold water half way up the jars, screw the covers on not too tightly, put the boiler over the fire and boil three hours. After it begins boiling, never disturbing it during that time, I feed the fire from the end door of stove and feed it well. No knitting or crocheting lace during this process. I have told a number of my friends just how to can corn, but they say they never have any luck, but I know they do not keep their fire hot enough. Their corn does not boil all the time—they attend to other matters and the heat goes down. Some say they could never boil it three hours, but I do not think it any more work to boil corn three hours than I do to make brown bread. My corn is boiling by 3 o'clock, and by 6 draw my kitchen table up to the stove, put a large dry cloth over my hand, take the can by the top and lift out on the table, carefully closing all doors to avoid a draft on them. I do not wash them off until next morning. Then I stow them in the cellar, covering them from the light, and in the winter I am repaid for all my trouble by delicious corncakes, succotash, etc., which are very satisfactory to my family and guests. I usually can twice, but this year I shall put up more.—Mrs. George O. Hopkins in Orange Judd Farmer.

## Domestic Hints.

BLEACHED APRICOTS.—Wash one-half pound of dried apricots twenty-four hours before wanted, and pour over them boiling water; let it stand not more than two minutes, then drain; add cold water to cover well and let stand twelve hours, then pour this water off. Make a boiling syrup of one-half pound of sugar and a third of a cupful of water, then turn it over the fruit and allow it to stand till morning. The fruit needs no cooking.

FILLETS OF DUCKLINGS WITH GREEN PEAS.—Roast two or three ducklings. Boil a quart of fresh green peas, and when tender drain off the water. Make a border on a dish of mashed potatoes. Have half a dozen slices of fried bread and when the ducks are done take them out, trim the fillets, and arrange alternately with the slices of fried bread against the mashed potato. Strain the gravy that has run from the ducks while roasting, over the peas, and pour them into the center of the dish.

TOMATO ICE SALAD.—Put a quart can of tomatoes in a saucepan over the fire with half an onion, a slice of green pepper, if convenient, three cloves, two bay leaves, a sprig of parsley, teaspoonful of sugar, and pepper and salt to taste. Cook until the onion is tender, about ten minutes, remove from the fire, press through a sieve fine enough to retain the seeds. When cold freeze as water-ice and mould, a melon mould is very pretty for it; pack in salt and ice in the usual way; turn it out in a nest of crisp young lettuce and serve with a mayonnaise dressing in a sauceboat.



# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, July 17, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Dec.
Wednesday.....	64 1/2 @ 64 3/4	65 1/2 @ 66 1/2
Thursday.....	64 1/2 @ 65 1/4	66 1/2 @ 67 1/4
Friday.....	66 @ 68 1/2	68 1/2 @ 70 1/2
Saturday.....	69 1/2 @ 68 1/2	70 1/2 @ 67 1/2
Monday.....	68 1/2 @ 68 1/2	69 1/2 @ 67 1/2
Tuesday.....	65 1/2 @ 67 1/2	67 1/2 @ 69 1/2

### LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	5s 4 1/2 d	5s 5 1/2 d
Thursday.....	5s 4 1/2 d	5s 5 1/2 d
Friday.....	5s 5 1/2 d	5s 7 d
Saturday.....	5s 6 1/2 d	5s 7 1/2 d
Monday.....	5s 6 1/2 d	5s 7 1/2 d
Tuesday.....	5s 5 1/2 d	5s 6 1/2 d

### SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	99 1/2 @ 99 3/4	—
Friday.....	1 02 @ 1 01 1/2	1 06 1/2 @ —
Saturday.....	1 03 1/2 @ 1 00 1/2	—
Monday.....	1 00 1/2 @ 99 1/2	—
Tuesday.....	92 1/2 @ 1 01 1/2	1 05 1/2 @ 1 05 1/2
Wednesday.....	1 01 1/2 @ 1 01 1/2	—

### WHEAT.

There was a decidedly improved tone developed in the wheat market during the latter part of last week, owing to unfavorable crop conditions in a large portion of the middle West, or what is termed the corn belt of the Missouri river section. There was a sharp advance Saturday in speculative values in Chicago, and also in this center. December wheat on local Board touched \$1.03 1/2, being an advance of 5c. per cental inside of four days, but there was a speedy decline from above point, December option selling down to \$1.00 1/2 before noon of Saturday, and closing at \$1.00 1/2. Values in the spot or sample market did not follow the fluctuations in the speculative market. Asking figures were advanced about 50c. per ton for spot wheat, but there was little or no business transacted, very little attempt being made by either shippers or millers, under the excitement above noted, to do any purchasing. Most of the mills are temporarily closed down, and ships continue in light supply, with ocean freight rates at a high range. If ships were offering more freely, the prospects of wheat doing better would be first class. The crop of wheat in this State is not turning out as well as generally expected, much of the grain having been knocked out of the shell by north winds just before harvest.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:  
December, 1901, delivery, \$1.03 1/2 @ 99 1/2 c.  
May, 1902, delivery, \$1.06 1/2 @ 1.05 1/2.  
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.01 1/2 @ 1.01 1/2; May, 1902, \$1.05 1/2 bid.

California Milling, old.....	\$1 00	@ 1 02 1/2
Cal. No. 1 shipping, alongside.....	95	@ 97 1/2
Oregon Valley.....	95	@ 1 00
Washington Blue Stem.....	97 1/2	@ 1 02 1/2
Washington Club.....	95	@ 97 1/2
Off qualities wheat.....	92 1/2	@ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	65 1/2 @ 65 1/2 d	55 9/2 @ 55 9/2 d
Freight rates.....	— @ 40s	36 1/2 @ 38s
Local market.....	\$1 07 1/2 @ 1 10	96 1/2 @ 98 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### FLOUR.

Quotable rates are without improvement. There has been, in fact, more or less cutting of prices lately in order to effect sales. Considerable flour is going outward to the Orient and to South America, more particularly to the latter country, but there are still liberal stocks in store and warehouses, notwithstanding the output of mills the past few weeks has been quite light.

Superfine, lower grades.....	\$2 25	@ 2 40
Superfine, good to choice.....	2 50	@ 2 75
Country grades, extras.....	3 00	@ 3 25
Choice and extra choice.....	3 25	@ 3 50
Fancy brands, jobbing.....	3 50	@ 3 65
Oregon, Bakers' extra.....	2 75	@ 3 15
Washington, Bakers' extra.....	2 75	@ 3 25

### BARLEY.

Values have not materially changed since last review for barley of any description, nor is there anything at the moment to warrant anticipating any radical fluctuations in values in the near future. Prices

cannot well go much lower, and conditions are not favorable for anything like stiff figures being established. Advices from most parts of the State are to the effect that the barley yield is of a very fair average and better than wheat. There is some foreign demand, but there are too few ships and too high freight rates for an active outward movement at present. Some barley is going to Europe by the steamer line recently established via Cape Horn.

Feed, No. 1 to choice.....	72 1/2	@ 75
Feed, fair to good.....	70	@ 72 1/2
Brewing, No. 1 to choice.....	77 1/2	@ 82 1/2
Chevalier, No. 1 to choice.....	—	@ —
Chevalier, No. 2.....	—	@ —
Chevalier, poor.....	—	@ —

### OATS.

The main feature of the week has been active purchasing of Red oats, mainly on speculative account. One operator did most of the buying and is reported to have taken not less than 10,000 and possibly 15,000 sacks. Inquiry during the past few days has been less active, but values are being fairly well maintained at the quoted range. Market for Blacks continues slow and weak. There are very few Whites or Grays offering, and values for these kinds are not clearly defined.

White Oats, fancy feed.....	1 15	@ 1 25
White, good to choice.....	1 05	@ 1 12 1/2
White, poor to fair.....	92 1/2	@ 1 00
Gray, common to choice.....	95	@ 1 10
Milling.....	1 20	@ 1 25
Surprise, good to choice.....	1 20	@ 1 25
Black Russian.....	80	@ 1 00
Red.....	85	@ 1 10

### CORN.

Owing to the disturbed condition of the market East and lack of local supplies, values have been unsettled and on the up grade during the greater part of the week. Little business has been done, neither buyers nor sellers showing inclination to enter into heavy transactions.

Large White, good to choice.....	1 40	@ 1 45
Large Yellow.....	1 40	@ 1 42 1/2
Small Yellow.....	1 55	@ 1 60
Eastern, in bulk (carload lots).....	1 35	@ 1 37 1/2

### RYE.

There is no business of consequence to record, although offerings are of fairly liberal volume.

Good to choice, new.....	75	@ 80
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### BUCKWHEAT.

No special or urgent demand is observable at the moment, and if pressure to realize was exerted, it is doubtful if full current quotations could be obtained.

Good to choice.....	1 50	@ 1 75
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### BEANS.

The market presents no new or especially noteworthy features. Trade is light, which is looked for at this date, with offerings of last crop of slim volume and new beans not yet on market. Business in new crop offerings for future delivery seems to be confined almost wholly to Limas, free purchases of which are reported at \$3.50 @ 3.75 at producing points. There are very few Limas here at present. Spot supplies are principally White beans and Pinks. There is no special selling pressure being exerted on White beans. Some ordinary qualities of Pinks are being offered at comparatively easy figures.

Peas, fair to good, 100 lbs.....	4 75	@ 5 00
Small White, good to choice.....	4 50	@ 4 90
Lady Washington.....	3 50	@ 3 75
Butter.....	—	@ —
Pinks.....	1 40	@ 1 60
Bayos, good to choice.....	2 30	@ 2 50
Reds.....	3 00	@ 3 25
Red Kidney.....	4 25	@ 4 50
Limas, good to choice.....	6 15	@ 6 25
Black-eye Beans.....	2 75	@ 3 25
Horse Beans.....	1 00	@ 1 25
Garhanzos, large.....	2 00	@ 2 25
Garhanzos, small.....	1 25	@ 1 75

### DRIED PEAS.

Values for Green Dried or Blue peas are at a rather wide range. Some of poor quality from Sacramento river district are offering at tolerably low prices, while choice Humboldt are being steadily held, some asking above top quotation. Niles peas are a present meeting with very little inquiry.

Green Peas, California.....	2 00	@ 2 50
Niles Peas.....	1 50	@ 1 75

### WOOL.

Market shows much the same condition as last noted. Movement would be more active if free wools were in more liberal supply, but stocks of this description are now down to small proportions. Values are notably unchanged, but choice fine, especially in large lots, would probably command higher figures than quoted. Coarse wools are not yet receiving any special attention from either Eastern or local buyers.

Humboldt and Mendocino.....	14	@ 15 1/2
Humboldt and Mendocino Lambs.....	11	@ —
Northern, free.....	12	@ 13
Northern, defective.....	10	@ 11
Middle Counties, free.....	10	@ 11

Middle Counties, defective.....	9	@ 10
Southern, 12 mos.....	8	@ 9
Southern, free, 7 mos.....	7	@ 10
Southern, defective, 7 mos.....	7	@ 8
Oregon Valley, fine.....	14	@ 15
Oregon Valley, coarse to medium.....	12	@ 13
Eastern Oregon, choice.....	11	@ 13
Eastern Oregon, fair to good.....	9	@ 10
Nevada, as to condition.....	10	@ 12

### HOPS.

The same inactivity previously noted continues to be experienced. Spot stocks are too small to admit of any noteworthy business, and on new hops to arrive, the views of growers and dealers as to values are too far apart for contracts to be made. It is probably well that it is so, for dealers in most instances want the contracts wholly in their favor.

Good to choice 1900 crop.....	15	@ 20
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### HAY AND STRAW.

In a general way the hay market has inclined in favor of the buying interest, especially for other than select Wheat and desirable Alfalfa, these two kinds constituting a very light proportion of offerings. Quotations were not reduced, but sales of ordinary Oat and Wheat hay at full figures were the exception.

Wheat, good to choice.....	8 00	@ 10 50
Wheat and Oat.....	7 50	@ 10 00
Oat.....	6 00	@ 9 00
Barley and Oat.....	6 00	@ 8 50
Alfalfa.....	7 00	@ 9 00
Clover.....	—	@ —
Stock.....	5 00	@ 7 00
Compressed.....	8 00	@ 12 00
Straw, 1/2 bale.....	35	@ 40

### MILLSTUFFS.

As most of the flouring mills have shut down temporarily, as they ordinarily do between seasons, the output of mill offal is at present exceedingly light, and market for Bran and Middlings shows decided firmness. Rolled Barley is in fair supply and is offering at rather easy figures. Cracked Corn and Cornmeal are scarce and high.

Bran, 1/2 ton.....	17 00	@ 18 00
Middlings.....	20 00	@ 22 00
Shorts, Oregon.....	17 50	@ 18 50
Barley, Rolled.....	16 50	@ 17 00
Cornmeal.....	27 50	@ 28 00
Cracked Corn.....	28 50	@ 29 00

### SEEDS.

Market is lightly stocked with the kinds quoted herewith and is showing very little life. Values remain nominally in same position as lately quoted. There is no likelihood that any especially noteworthy features will be developed for at least several weeks to come.

	Per cwt.
Mustard, Trieste.....	— @ —
Mustard, Yellow.....	— @ —
Flax.....	2 50 @ 3 00
Alfalfa, Utah.....	— @ —
Alfalfa, California.....	— @ —
	Per lb.
Canary.....	3 1/2 @ 3 3/4
Rape.....	2 @ 2 1/2
Hemp.....	3 @ 3 1/2

### BAGS AND BAGGING.

While principal holders quote Grain Bags the same as a week ago, there are evidences of concessions being granted buyers in not a few instances. There is some talk of the price being marked up to 8 1/2 c. before the season closes, but that this figure will be realized in a regular way is not generally considered probable. The demand will be apt to be slow from this time forward.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	8 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	8 @ 8 1/2
State Prison Bags in lots of 2000, 1/2 100.....	— @ —
Wool Sacks, 4 lbs.....	32 1/2 @ 35
Wool Sacks, 3 1/2 lbs.....	30 @ 32 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/2
Fruit Sacks, cotton.....	6 1/2 @ 7 1/2

### HIDES, PELTS AND TALLOW.

The improved values recently established for Hides are being well maintained. Pelts are selling at generally unchanged rates, with demand not very brisk. Tallow is in good request at the prices quoted.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/2 @ —	9 @ —
Medium Steers, 48 to 56 lbs.....	9 1/2 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/2 @ 9	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/2 @ 9	8 @ —
Wet Salted Kip.....	9 1/2 @ —	8 1/2 @ —
Wet Salted Veal.....	9 1/2 @ —	8 1/2 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50	@ —
Salted Horse Hides medium.....	2 00	@ —
Salted Horse Hides small.....	1 00	@ —
Dry Horse Hides, large.....	1 75	@ —
Dry Horse Hides, small.....	1 00	@ 25
Dry Colts' Hides.....	50	@ —
Pelts, long wool, 1/2 skin.....	75	@ 100
Pelts, medium, 1/2 skin.....	50	@ 75

Pelts, short wool, 1/2 skin.....	30	@ 40
Pelts, shearing, 1/2 skin.....	10	@ 25
Deer Skins, best summer.....	35	@ —
Deer Skins, good medium.....	—	@ 30
Deer Skins, thin winter.....	—	@ 10
Elk Hides.....	10	@ 12
Tallow, good quality.....	4 1/2	@ 4 3/4
Tallow, No. 2.....	4	@ 4 1/2
Goat Skins, perfect.....	80	@ 37 1/2
Goat Skins, damaged.....	10	@ 20
Kid Skins.....	5	@ 10

### HONEY.

A shipment of about 200 cases Extracted went forward this week per steamer for Germany. The quality is reported light amber and the price 4 1/2 c. Sales at much higher figures are difficult to effect, unless in a small way for very choice. Comb is in light supply, with inquiry for same almost wholly on local account.

Extracted, White Liquid.....	5 1/2 @ —
Extracted, Light Amber.....	4 1/2 @ 5
Extracted, Amber.....	4 @ 4 1/2
White Comb, 1 lb frames.....	11 @ 12 1/2
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7 1/2

### BEEFWAX.

Not much offering from any quarter. Previously quoted values continue in force.

Good to choice, light, 1/2 lb.....	26	@ 28
Dark.....	24	@ 25

### LIVE STOCK AND MEATS.

Considering that it is the mid-Summer season, when Beef is ordinarily not in active request, there is a very fair business doing and at tolerably steady values. Mutton is moving at much the same prices as for several weeks past, with no special excess of offerings. Veal is in very moderate receipt, as is also Lamb, both commanding firm figures. Hogs are in light receipt and are meeting with a firm market.

Beef, first quality, dressed, net 1/2 lb.....	6 1/2 @ 7
Beef, second quality.....	6 1/2 @ 6 1/2
Beef, third quality.....	6 @ —
Mutton—ewes, 6 1/2 @ 7 1/2 c; wethers.....	7 @ 8
Hogs, hard grain fed, medium.....	6 1/2 @ 6 1/2
Hogs, small, fat.....	6 1/2 @ 6 1/2
Hogs, large, hard.....	5 1/2 @ 6
Hogs, feeders.....	— @ —
Hogs, country dressed.....	7 1/2 @ 7 1/2
Veal, small, 1/2 lb.....	9 @ 10
Veal, large, 1/2 lb.....	8 @ —
Lamb, spring, 1/2 lb.....	8 1/2 @ 9

### POULTRY.

Inquiry has been mainly for Chickens, and comparatively good figures were realized most all the week for desirable stock, young and old. Arrivals of Eastern were of only moderate volume, as compared with recent importations. Full grown young chickens made the lightest showing, offerings being principally Broilers and old fowls. Turkeys, Ducks and Geese met with very little demand. Pigeons were in fair request. At the close the poultry market throughout was more quiet than a few days ago, and a generally easier feeling prevailed.

Turkeys, live hens, 1/2 lb.....	8 @ 10
Turkeys, live gobblers, 1/2 lb.....	8 @ 10
Hens, California, 1/2 dozen.....	4 00 @ 5 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	5 00 @ 6 00
Fryers.....	3 00 @ 4 00
Broilers, large.....	2 75 @ 3 00
Broilers, small.....	1 50 @ 2 25
Ducks, old, 1/2 dozen.....	2 50 @ 3 00
Ducks, young, 1/2 dozen.....	3 00 @ 4 00
Geese, 1/2 pair.....	1 00 @ 1 25
Goslings, 1/2 pair.....	1 12 1/2 @ 1 25
Pigeons, old, 1/2 dozen.....	1 50 @ 1 75
Pigeons, young.....	1 50 @ 1 75

### BUTTER.

Prices have been again advanced for all grades of fresh butter, both creamery and dairy product, but for other than most select qualities the market is not noteworthy for firmness. There are large quantities of cold storage butter to draw upon, and attention of consumers will soon be diverted to same.

Creamery, extras, 1/2 lb.....	20	@ —
Creamery, firsts.....	19	@ —
Creamery, seconds.....	—	@ —
Dairy, select.....	19	@ —
Dairy, firsts.....	17	@ 17 1/2
Dairy, seconds.....	15	@ 16
Dairy, soft and weedy.....	—	@ —
Mixed store.....	13	@ 14
Creamery in tubs.....	18	@ 19 1/2
Pickled Roll.....	—	@ —
Firkin, California, choice to select.....	17	@ 18
Firkin, common to fair.....	15	@ 16

### CHEESE.

Arrival are light and are likely to prove so during the balance



ceding week, and prospects good for further improvement in values in the near future. Dealers will endeavor to have prices for fresh stock at a high range during the next four or five months, so as to enable them to work off cold storage stock to advantage.

California, select, large, white and fresh. 19 @—  
California, select, irregular color & size. 17 @—  
California, good to choice store. 14 @15  
Eastern, good to choice. 15 @17

#### VEGETABLES.

Changes in quotable rates have not been numerous or very pronounced since last review. Prices current for best qualities were as a rule well maintained, while defective stock went in the main at low figures and then moved slowly. Business now doing in Onions is mainly in Yellow, which are in very fair supply, while season for Red is nearly ended, and for latter variety there is little inquiry. Tomatoes were not in heavy receipt and brought as a rule fairly good prices. Green Corn showed better average quality than preceding week and met with improved demand.

Asparagus, # box.....	50	@1 50
Beans, String, # lb.....	1 1/2	@ 2 1/2
Beans, Lima, # lb.....	3	@ —
Beans, Wax, # lb.....	2	@ —
Cabbage, choice garden, # 100 lbs.....	50	@ 60
Cauliflower, # dozen.....	50	@ —
Corn, Green, # sack.....	50	@ 1 00
Corn, Green, Alameda, # large crate. 1 00	@1 50	
Cucumbers, # small box.....	50	@ 60
Cucumbers, Bay, # large box.....	1 00	@1 25
Egg Plant, # box.....	1 25	@1 50
Garlic, # lb.....	2	@ 3
Onions, Yellow Danver, # cental....	80	@ 90
Onions, New Cal. Red, # cental....	35	@ 50
Peas, Sweet garden, # lb.....	2	@ 2 1/2
Peas, good to choice, # sack.....	75	@1 00
Peppers, Green Chile, # sack.....	75	@1 25
Peppers, Bell, # sack.....	75	@1 25
Squash Summer, # small box.....	40	@ 65
Summer Squash, Bay, # large box.....	1 00	@1 25
Tomatoes, River, # large box.....	1 25	@1 50
Tomatoes, # small box.....	50	@ 65

#### POTATOES.

Most of the potatoes now arriving are in sacks, and in a few weeks more there will be virtually none coming forward in boxes. Market was moderately firm during most of the week, with fair shipping demand. There were very few potatoes sold under \$1 per cental, and for some fancy Burbanks \$1.50 was realized. Shipping demand has been fairly active during the past few days and market has ruled quite firm, with sales mainly within range of \$1.10@1.40.

Burbanks, Petaluma-Tomales, # ctl. —	@ —
Burbanks, Oregon, # cental.....	@ —
River Burbanks, in boxes, # cental. 1 15	@ 40
River Burbanks in sacks, # cental.. 1 10	@ 15
Early Rose, # cental.....	1 00 @1 15
Mission Garnet Chile, in sacks.....	1 00 @1 15

#### The Fruit Market.

##### FRESH FRUITS.

There was no glut of desirable qualities of any variety of fruit now in season. Inferior stock was naturally in poor request and found buyers only at a low range of prices. Apricots in bulk have been selling mainly within range of \$15@25 per ton for fairly good to choice, while for extra choice \$30 was possible, although it was the rare exception where offerings were sufficiently fine to command latter figure. Apples of desirable quality were in light stock and salable to advantage. For choice Gravenstein, four-tiers to the box, \$1.25 was readily obtainable. Peaches sold at much the same range of prices as preceding week, with market firm for choice shipping stock. Plums made a very good display as to variety and quality, but prices were not particularly well maintained. Grapes were in moderate receipt, but the quality was in the main under choice, and offerings in consequence did not sell very readily at prices generally demanded. Canteloupes and Watermelons were in increased supply, and such as were ripe met with good inquiry at tolerably stiff prices. Berries were in only moderate receipt, but demand was rather light for most kinds. It was the exception where any appreciable advance in values was established.

Apples, Gravenstein, # 4-tier box....	1 00	@ 1 25
Apples, Red Astrachan, # 50-lb. box.	40	@ 1 00
Apples, green, # small box.....	15	@ 30
Apricots, Royal, # box.....	30	@ 60
Apricots, fair to choice, # ton.....	15 00	@30 00
Blackberries, # chest.....	3 50	@ 5 00
Cantaloupes, # crate.....	1 50	@ 2 75
Crabapples, # small box.....	35	@ 50
Currents, # chest.....	4 00	@ 6 00
Figs, 1-layer box, 50@75c; 2-layer....	1 00	@ 1 50
Grapes, Seedless, # crate.....	50	@ 1 00
Grapes, Vacaville, # box.....	75	@ 1 25
Logan Berries, in baskets, # chest.. 4 00	@ 6 00	
Nectarines, # box.....	50	@ 75
Nutmeg Melons, # crate.....	1 00	@ 2 00
Pears, Dearborn Seedling, # box.....	40	@ 65
Peaches, # box.....	30	@ 60
Pears, River Bartlett's, # 40-lb. box.. 1 00	@ 1 30	
Plums, # box.....	25	@ 50
Prunes, # box.....	40	@ 60
Raspberries, # chest.....	5 00	@ 6 00
Strawberries, Longworth, # chest.. 3 50	@ 5 00	

Strawberries, Large, # chest.....	3 50	@ 4 50
Watermelons, # 100.....	10 00	@20 00
Whortleberries, # lb.....	10	@ 12 1/2

#### DRIED FRUITS.

Dealers without exception report a quiet market for cured and evaporated fruits of all descriptions. Aside from Apricots there is not much new stock offering, and bids on 'cots are slightly lower than preceding week. Local handlers claim less active shipping inquiry, which is supposed to be in a great measure due to the recent extremely hot weather East. While bids show a reduction of 1/4@1/2c, there are no evidences of free offerings at the easier figures, especially of desirable qualities. Some 'cots of rather ordinary quality were this week exhibited for sale, and where selling pressure was exerted it was mainly on stock of this sort. For fancy Royals as high as 10c. is asked, and there is scarcely anything obtainable in the line of new 'cots as low as 7c. Buyers name 5c. for choice Peaches in sacks, July and early August delivery, and 4 1/2c. for same grade, later deliveries, but bids are not being accepted. Evaporated Apples are scarce; a few choice new in 50-lb. boxes are offering at 5 1/2c. Plums of new crop are expected to be on market in liberal quantity in a week or two; for choice new Red, pitted, 5c. is asked. New White Figs in 10-lb. boxes are on market at 5@7 1/2c., and Black in 25-lb. boxes at 4@4 1/2c. per pound. The little business doing in Prunes is mainly on basis of 2 1/2c. for the four sizes, although the market presents a fairly firm tone, and to purchase freely better figures would have to be paid. Some new Sonomas are reported contracted at 2 1/2c. for the four sizes.

##### EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7	@ 7 1/2
Apricots, Royal, choice, in sacks, # lb.. 8	@ 8 1/2	
Apricots, Moorpark.....	—	@ —
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/2	@ —
Apples, 50-lb boxes, rings, pressed, good to choice.....	3 1/2	@ 4 1/2
Figs, White, fancy pressed.....	—	@ —
Nectarines, # lb.....	4	@ 5
Peaches, unpeeled, fancy.....	5 1/2	@ 5 1/2
Peaches, unpeeled, choice.....	3 1/2	@ 4
Peaches, peeled, in boxes.....	11	@ 13
Pears, unpeeled Bartlett's, halved, fancy. 5 1/2	@ 6 1/2	
Pears, halved, unpeeled Bartlett's.....	3 1/2	@ 4 1/2
Pears, quartered, unpeeled Bartlett's....	3 1/2	@ 4 1/2
Plums, Black, pitted.....	3 1/2	@ 4 1/2
Plums, White and Red.....	4 1/2	@ 5
Prunes, Silver.....	4 1/2	@ 6

##### COMMON SUN-DRIED.

Apricots.....	6 1/2	@ 7
Apples, sliced.....	2	@ 2 1/2
Apples, quartered.....	2	@ 3
Figs, Black.....	—	@ —
Figs, White.....	—	@ —
Peaches, unpeeled.....	2	@ 3
Pears, prime halves.....	2 1/2	@ 3 1/2

Prices for 1900 crop Prunes, as named by the California Cured Fruit Association: District No 3, four sizes, 3c. per lb.; 40-50s, 4 1/2c; 50-60s, 4 1/2c; 60-70s, 3 1/2c; 70-80s, 3 1/2c; 80-90s, 2 1/2c; 90-100s 2 1/2c; 100-120s, 1 1/2c; 130 up, 1 1/2c. The selling price of Prunes for District No. 1 is 1/2c. per pound less, and for District No. 2 1/4c. per pound less than for District No. 3.

#### RAISINS.

There is a moderate movement reported in seeded Raisins at the unchanged figure of 5 1/2c. for 1-lb. cartons, but little doing in any other stock. All the clusters and layers are now out of the hands of the Growers' Association, the last transfer aggregating not to exceed six carloads.

##### F. O. B., CARLOAD LOTS.

Imperial Clusters, 6-crown, # 20-lb box.....	3 00	@ —
Dehesa Clusters, 5-crown.....	2 50	@ —
Fancy Clusters, 4-crown.....	2 00	@ —
London Layers, 3-crown, # box.....	1 60	@ —
do do 2-crown, # box.....	1 50	@ —
(Usual advance for fractions.)		
Loose Muscatel, 4-crown standard, # lb.....	—	@ 7
Loose Muscatel, 3-crown.....	—	@ 6 1/2
Loose Muscatel, 2-crown standard..	—	@ 6
Loose Muscatel, seedless.....	—	@ 6 1/2
(Above prices for loose raisins are for 50-lb boxes.)		
Seeded Raisins, 1-lb packages, # lb.. 5 1/2	@ —	
Loose Muscatel Packets, 5 1/2c, 5 1/4c. and 5c. for 4, 3 and 2 crown respectively.		
Thompson Seedless.—Bleached fancy, # lb., —c; choice, 9c; standard, —c; prime, —c. Unbleached 7 1/2@9c.		
Sultanas.—Bleached fancy, # lb., —c; choice, 8 1/2c; standard, —c; prime, —c. Unbleached, 7c.		

#### CITRUS FRUITS.

Orange market ruled exceedingly quiet, with offerings not especially heavy, but of ordinary qualities there were more than enough for the demand. A few Valencia in good condition sold to fair advantage. Lemons sold at practically same range of prices as last quoted, but tendency on choice to select was more in favor of the selling than the buying interest, the inquiry being very fair, demand being helped materially by light stocks of Limes and stiff prices for same.

Oranges—Navel, # box.....	—	@ —
Seedlings, # box.....	50	@ 1 25
Valencias, # box.....	75	@ 2 50
Grape Fruit, # box.....	75	@ 1 50
Lemons—California, select, # box.....	2 25	@ 2 50
California, good to choice.....	1 75	@ 2 50
California, common to fair.....	1 00	@ 1 50
Limes—Mexican, # box.....	6 50	@ 7 50

#### NUTS.

No business of consequence reported and very little spot stock at present upon which to operate. For new soft shell Almonds growers are asking 10c. net, with the expressed views of buyers half a cent to a cent lower, and no business consummated, as far as made public.

California Almonds, shelled.....	18	@ 22
California Almonds, paper shell, # lb.....	12	@ 14
California Almonds, soft shell.....	10	@ 12
California Almonds, hard shell.....	6	@ 7
Peanuts, California, fair to prime.....	4 1/2	@ 5 1/2
Peanuts, Eastern, hand-picked.....	5 1/2	@ 6
Pine Nuts.....	5	@ 6

#### WINE.

Market presents the same firm tone as for some time past, but in the absence of noteworthy offerings from first hands, wholesale values are for the present largely nominal at 22@25c. per gallon for dry wines of last season's vintage. Indications are that dry wine grapes of coming season will command from \$20@25 per ton, as to quality, quantity and place of delivery. The steamer Leelanaw, clearing from this port Monday for New York, carried 191,278 gallons and 36 cases wine.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks.....	77,376	146,821
Wheat, centals.....	306,594	320,610
Barley, centals.....	41,450	85,275
Oats, centals.....	10,101	25,541
Corn, centals.....	4,200	7,800
Rye, centals.....	490	490
Beans, sacks.....	1,246	1,676
Potatoes, sacks.....	22,707	32,622
Onions, sacks.....	7,252	8,400
Hay, tons.....	3,852	5,124
Wool, bales.....	1,355	2,853
Hops, bales.....	...	...

#### EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks.....	133,800	138,860
Wheat, centals.....	302,63	302,263
Barley, centals.....	24,889	24,889
Oats, centals.....	340	340
Corn, centals.....	1,672	1,672
Beans, sacks.....	354	392
Hay, bales.....	110	110
Wool, pounds.....	11,373	11,373
Honey, cases.....	324	324
Potatoes, pack's... 2,258	4,619	881

THE West Coast Wire Works has moved its office and salesroom to 17 and 19, Fremont street, San Francisco.

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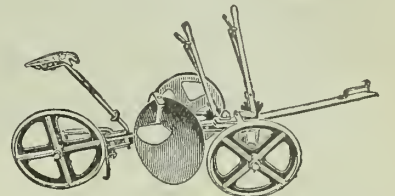
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#### California Dried Fruit at New York.

NEW YORK, July 17. — Evaporated apples, common, 3 1/4@4c; prime wire tray, 5 1/4@5 1/2c; choice, 6@6 1/2c; fancy, 6 1/2@7c.  
California Dried Fruits.—Movement light, and no special changes in quotable rates.  
Prunes, 2 1/2@6 1/2c.  
Apricots, Royal, 8@12 1/2c; Moorpark, 9 1/4@14c.  
Peaches, unpeeled, 7@10c; peeled, 11@14c.

#### Rotary Disc Plows.



All the plow manufacturers have been making experiments of this style of plow, and this is evidence that they see sufficient merit in the principle of the disc plow to try to determine if they can make the plow so that it will do good work under all conditions. The Benicia Agricultural Works of Benicia, Cal., evidently have struck upon the right model, for they have placed orders to put up over 1000 of these plows for next season. From all accounts, it will be a surprise to other disc plow manufacturers, and many applications for agencies are already being made to the selling agents, Baker & Hamilton, San Francisco, Sacramento, Los Angeles.

## GLENN RANCH, Glenn County, :: :: California, FOR SALE In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

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## THE STOCK YARD.

### Baby Beef.

In the latter part of October, 1900, the Kansas Experiment Station put into the feed lots 130 head of calves that had just been weaned. They were divided into lots to test the value of alfalfa hay, prairie hay, corn, Kafir corn and soy beans in the production of baby beef. Prof. H. M. Cottrell gives the following sketch of the methods and results:

Sixty head of heifer calves were purchased in the Kansas City stock yards, weighed an average of 418 pounds each, cost \$4.25 per cwt. at the yards, and cost an average of \$18.25 per head delivered in the college feed lots. These were range calves, grade Shorthorn, Hereford and Angus. Fifty head were purchased of farmers near Manhattan and had been kept with their dams through the summer in small pastures. Twenty head were mixed-bred calves that had been purchased around Manhattan when born, and had been raised at the college by hand, ten being raised on creamery skim milk and ten on whole milk. The calves were vaccinated to prevent black leg.

small amount of feed required to make 100 pounds of gain. Last year the Kansas Experiment Station reported making 100 pounds of gain on 1000-pound steers with 718 and 780 pounds of corn. Many old feeders wrote us that they could not make such gains with so little feed. Prof. Henry reports that he finds the average in a large number of feeding experiments with steers to be 100 pounds of gain for 1000 pounds of grain and 500 pounds of roughage. These calves averaged 100 pounds of gain for from 439 to 594 pounds of grain and 426 to 626 pounds of hay—about one-half the amount required for mature cattle.

### Market Value of Silage.

Prof. F. H. King, in the Country Gentleman, places the value of silage as follows:

"Well-cured timothy hay contains about 15% of moisture and 85% of dry matter; good, well-cured silage put in when the corn is at the right stage should contain 28% to 30% of dry matter. If we were to count the feeding value of corn silage equal to the feeding value of good timothy hay, making the comparison on the amount of dry matter per ton in each case, and calling timothy hay worth \$7 per ton, the silage would be worth  $\frac{28}{85}$  of \$7, or \$2.30.

nish 480 pounds and one ton of hay 1740 pounds of dry substance. When the digestibility of these two materials is calculated, we find that the ton of silage will furnish 336 pounds of digestible food nutrients, while the hay will supply about 1000 pounds. Based on these figures alone, the silage would be worth one-third as much as hay. But the total food nutrients of the hay contain more protein than do the total nutrients of the silage, while on the other hand the cow must expend more energy in making the nutrients of the hay available.

The protein is relatively more valuable than the other food constituents, but its higher value is offset, in part at least, by the extra expenditure of energy in making it available. Based, then, on the total food constituents, we would consider silage for feeding dairy stock worth from one-fourth to one-third as much as a good quality of stock hay (free from clover). When good, marketable hay is worth over \$12 per ton at the farm, silage fed with the cheaper grades of hay or with corn stover is a far more economical coarse feed to use."

### A Scenic Idaho District.

Central Idaho is typical of many localities that possess attractive, charming scenery that would



Snake River Below Ballards Landing, Seven Devils, Idaho.



Crossing the Middle Fork of Salmon River, Idaho.

Without this safeguard we should not have dared to undertake the experiment.

All lots were fed twice daily all they would eat, water and salt were always before them, and they were sheltered in common board sheds opened to the south. The yards were fenced with woven wire.

The calves were fed seven months with the following results:

Feed.	Average gain per head. Lbs.	Grain per 100 lbs. gain. Lbs.	Hay per 100 lbs. gain. Lbs.
Alfalfa hay and corn...407		470	544
Alfalfa hay and Kafir corn.....379		524	626
Prairie hay, corn $\frac{2}{3}$ and beans $\frac{1}{3}$ .....378		520	486
Prairie hay, Kafir corn $\frac{2}{3}$ and soy beans $\frac{1}{3}$ ...342		594	539
Skim-milk calves, alfalfa hay and corn...440		439	436
Whole-milk calves, alfalfa hay and corn...404		470	420

At the close of the experiment, May 27, the entire lot averaged 800 pounds per head in the college feed lots. The shrinkage in shipping to Kansas City was 3%. Thirty-two steers averaged 838 pounds and sold at \$5.40 per 100 pounds, seventy-four heifers averaged 758 pounds and sold at \$5.35, and eighteen heifers averaged 741 pounds and sold at \$5.15. Six head of heifers went as springers.

The remarkable feature of this experiment is the

It is my judgment that good, well-cared and properly-matured corn, when made into silage, is worth more, pound for pound of dry matter, than the best timothy hay for milch cows, and I have been in the habit of thinking good corn silage worth at least \$2 per ton; but it is my judgment that this is an underestimate of its value. You can, of course, make various comparisons from the data of feeding tables. Such comparisons, however, are never very close to the actual case in hand."

Prof. C. S. Phelps makes the following statement upon the same subject:

"Owing to the fact that silage is bought or sold but very little, it is difficult to give it a market value based on the demands of the market. Based on the cost of production, it is usually given a value in New England of from \$2.50 to \$3.50 per ton. The value based on cost will vary according to the amount raised and the amount of hand labor employed. From my experience in growing the crop, I should not care to put the value below \$2.50 to \$2.75 per ton, if a profit is to be realized. The actual cost of raising 150 tons on our college farm in 1899 was \$2.40 per ton.

"Another method of valuation would be to compare the total amount of digestible nutrients in a ton of silage with that of a ton of good stock hay. Silage that is allowed to become well glazed before cutting should contain about 24% of dry matter (free from water), while well-dried hay would contain 87%. Based on these figures, one ton of silage should fur-

have remained inaccessible, if not, indeed, unknown, but for the discovery of dormant resources of mineral wealth.

The illustrations on this page are glimpses of a scenic paradise in the heart of a rich region. The Seven Devils country and the basin of Salmon river are rugged and mountainous, and have long been remote from settlement, but during the past few years the advancing fringe of settlement pushed the pioneer prospectors forward into it.

Now that the way is broken and roads built by the miners, the country is found to have additional possibilities of wealth production from grand natural scenic attractions. Hotels and summer homes, and the facilities that attend on social life, will in turn aid to more complete discovery and exploitation.

### Bounty for Squirrel Tails.

Whenever a bounty act begins to operate in good shape the county officers grow tired of it. Take the case in Tulare county, where the total number of squirrel tails on deposit with the clerk of the Board of Supervisors is 84,300. This number is the total for the month of June. The bounty on these tails amounts to \$2529. The bounty law has been repealed and no bounty will be paid for squirrels killed after July 1. The supervisors hold, we presume, that it is cheaper to let the squirrels eat the farmers' wheat.



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SAN FRANCISCO, CAL.**THE APIARY.****The Career of R. Wilkin.**

We find in Gleanings in Bee Culture an account of the late R. Wilkin of Ventura county from which we take the most striking statements about this veteran California bee keeper. He came to California in 1875 with a carload of bees, and subsequently settled in the Sespe valley. His first experience with them was in helping to prepare a shipment of bees for Mr. Harbison, who was then about to leave Pennsylvania (where he was then residing) for California. This was some time in the early '50's; and the result of this venture, and how Harbison subsequently came to be the great bee king of California, owning and operating at one time some 6000 colonies, are matters of history.

Mr. Wilkin began keeping bees while he was at Westminster College, Pa. The next we know of him in connection with bees was at the county fairs of northern Ohio. On these occasions he astonished the natives by having a swarm of bees hanging from his hat and beard. This series of remarkable feats was accomplished by having a queen caged under his chin; and as long as she remained the bees continued to hang from his head, to the wonder of the aforesaid natives. It is not told that he was ever stung, except on one occasion, when he says he very foolishly attempted to put some of those gentle, fly-like bees in his mouth. The incident resulted in his being stung in the throat, and from that time on he never attempted the feat again.

At that time Mr. Wilkin's home was at Cadiz, Ohio. From this point he attained considerable celebrity as a bee master; and so many were the questions that were piled him that he finally, to answer all, wrote a book of 100 pages, entitled "Hand-book on Bee Culture," which at the time, 1871, had a considerable sale.

Just what induced him to go to California is not stated. Possibly the success of Harbison, who had preceded him, had much to do with it; but after he had gone to the coast in 1875, with his family and a carload of bees, and had produced those enormous yields of sage honey in the now celebrated Sespe Apiary, his celebrity, which had hitherto been only local, was made world-wide. Here he produced honey by the carload, and sold in the London markets for a number of years.

His largest yield was in 1884, when he produced from his Sespe Apiary 60,000 pounds of honey. The largest number of colonies he had in his yard at one time was 700. Such a number managed profitably, in one apiary, seems, to an Eastern keeper, almost incredible. But to one who has just come from the location, with its green mountains on every side, and the orange groves in the valley, the number does not seem so impossible of belief after all. Indeed, to see is to believe.

In later years the Sespe Apiary has been occupied by his son-in-law, J. F. McIntyre; and during all the years this location has supported on an average 500 colonies.

Mr. Wilkin, even up to the time of his death, retained a deep interest in bees; and, though his success in life had been such that it was no longer necessary for him to work, yet at the time of his death he was managing an apiary at Newhall, Cal., some 450 colonies.

Although well advanced in years, when most old men lose interest in the business of a lifetime, Mr. Wilkin retained all the enthusiasm of youth. His love of bees seemed to be as strong as ever; and even up to the last days his

mind seemed to possess all the vigor of his earlier years. Mr. Wilkin was twice elected president of the California State Bee Keepers' Association, and in all the doings of that organization was a prominent and conspicuous figure.

**THE DAIRY.****Inspection of Dairy Products Exported.**

We alluded in last week's PACIFIC RURAL PRESS to the Act of Congress making appropriations for the United States Department of Agriculture for the fiscal year ending June 30, 1902, which contains the following paragraph in the section relating to the general work of the Bureau of Animal Industry:

Provided, That the Secretary of Agriculture may construe the provisions of the Act of March third, eighteen hundred and ninety-one, as amended March second, eighteen hundred and ninety-five, for the inspection of live cattle and products thereof, to include dairy products intended for exportation to any foreign country, and may apply, under rules and regulations prescribed by him, the provisions of said Act for inspection and certification appropriate for ascertaining the purity and quality of such products, and may cause the same to be so marked, stamped, or labeled as to secure their identity and make known in the markets of foreign countries to which they may be sent from the United States their purity, quality, and grade; and all the provisions of said Act relating to live cattle and products thereof for export shall apply to dairy products so inspected and certified.


Discretionary authority is thus given to the Secretary of Agriculture to inaugurate and regulate this new inspection service. In the exercise of this discretion Secretary Wilson has decided to make a beginning in the customs districts of Boston, New York, Chicago and San Francisco. But, instead of entering immediately upon a preconceived system of inspection, a number of weeks will be devoted to becoming familiar with all the persons, conditions and circumstances connected with the export of dairy products of all kinds from the four districts named. The necessary data can thus be comprehensively obtained for formulating such regulations as may become expedient for conducting this service.

The character and extent of the inspection and certification to be ultimately made may not be decided for some time. But it is probable that at an early date the owners or shippers of products for export may, upon application, have the same marked and certified as to purity and quality, provided they are above a minimum grade yet to be fixed.


The Department has received numerous letters from experienced merchants, both foreign and domestic, as well as from other reputable parties, urging that one of the first rules to be established be in the interest of honesty in trade, by aiming to prevent the export of packages marked in any way incorrectly or tending to mislead or deceive buyers as to the character of their contents. The Secretary will endeavor to administer this law in accordance with its clearly expressed purpose to secure the identity and improve the reputation of dairy products from the United States in the markets of foreign countries.




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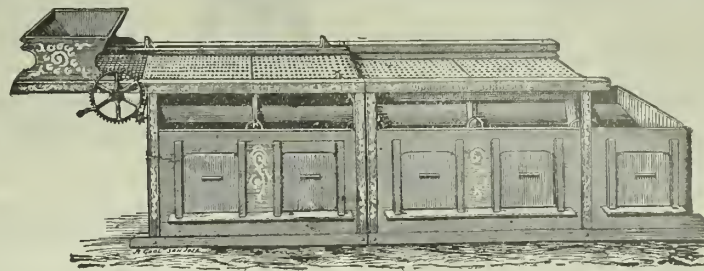
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## Patrons of Husbandry.

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To THE EDITOR:—The convention met in Blanchard's Hall, Los Angeles, July 9. The opening address by W. A. Becket was well received. The address of welcome by D. H. Gillan, on the principle of co-operation in general and co-operative insurance in particular, was a very convincing effort.

The most of the morning session was spent in the election of officers and listening to the reports of committees.

The following officers were re-elected: W. A. Beckett, Santa Ana, president; S. D. Merk, Paso Robles, vice-president; G. F. Cromer, Los Angeles, secretary; H. Gregory, Santa Rosa, treasurer. Executive Committee—W. A. Beckett, Santa Ana; G. F. Cromer, Los Angeles; P. E. Walline, Ontario; Charles Barnard, Ventura; N. P. Nelson, Fresno.

The paper of F. D. Reed of Fullerton, on statistics, at the afternoon session was not dry, as statistics usually are. The facts produced were enough to convert anyone to co-operation.

The question of needed legislation was tersely handled by P. E. Walline of Ontario, president of the San Bernardino County Mutual Co. During the discussions that followed many good ideas were exchanged.

G. F. Cromer, W. J. Clark, Mr. Beckett and N. P. Nelson, took an active part in the discussion, from which was gleaned the following data:

Co-operative fire insurance has been carried on for a great many years. It costs in the Eastern States about \$1.50 per \$1000, Switzerland, New Zealand and the Pacific coast 80 cents per \$1000 per year.

There are nine counties organized in California since 1897, carrying \$2,000,000 worth of property.

G. F. CROMER, State Secretary.

### Sonoma Valley Grange.

At the meeting of the El Verano Grange, held in Sonoma last week, eight new members were taken in. The Index-Tribune says a motion is pending to change the name from El Verano Grange to Sonoma Valley Grange, and the change will probably be made at the next meeting. It is the object of the members to make the Grange a representative body of farmers of the entire valley. Meetings are held the second and fourth Wednesdays of every month in Odd Fellows Hall.

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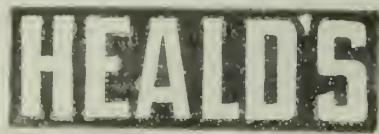
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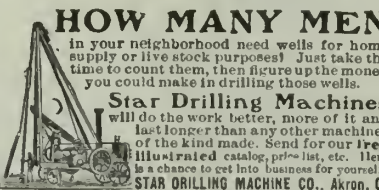
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We attend to all business connected with patents, such as the preparation of Caveats, Trade-Marks, Design Patents, Assignments, Licenses and Agreements. We make examinations as to the patentability of inventions, searches, and give opinions as to infringements, or the scope or validity of Patents. Our Branch Offices and arrangements for Foreign Patents, Trade-Marks, etc., are very extensive and complete. Inventors' Guide sent free on application.

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## New Patents.

DEWEY, STRONG & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR WEEK ENDING JULY 2, 1901.

677,532.—CAR FENDER—S. W. Alexander, Los Angeles, Cal.  
677,555.—PULLEY—D. B. Baker, Tacoma, Cal.  
677,495.—VINEYARD PLOW—J. A. Bilz, Pleasanton, Cal.  
677,406.—SAW GAUGE—C. F. Fowler, Columbia City, Or.  
677,844.—EXCAVATOR—J. C. des Granges, S. F.  
677,508.—BOILER LEVELING DEVICE—Grise & Walch, Montague, Cal.  
677,510.—ROASTING FURNACE—B. Hall, Nevada, Cal.  
677,544.—WINDOW—E. Hipolito, Los Angeles, Cal.  
677,456.—RAILWAY—G. Larson, Hothell, Wash.  
677,671.—BEDSTEAD—H. C. Lausen, Newman, Cal.  
677,784.—STOP MECHANISM FOR MACHINES—F. T. Leilich, S. F.  
677,788.—PIPE BOILER—W. MacFarlane, Seattle, Wash.  
677,526.—WEIGHING MACHINE—J. Manes, S. F.  
677,795.—STAMP MILL FEEDER—A. C. Pratt, S. F.  
677,800.—MOSAIC PANELS—W. J. Blackwood, Montevia, Cal.  
677,843.—ELECTRIC CUT OUT—F. H. Rogers, San Jacinto, Cal.  
677,804.—BICYCLE BRAKE—J. Schulte, Jr., Monterey, Cal.  
677,734.—TELEPHONE SWITCH—W. D. Watkins, San Jose.  
677,839.—ANCHOR—J. N. Young, Alameda, Cal.  
34,713.—DESIGN—O. H. Greene, Red Bluff, Cal.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

DISK HARROW.—No. 677,140. June 25, 1901. O. T. Owens, Altamont, Cal., one-half assigned to J. E. Allison. This invention comprises a series of turnable disks, disk-shaped colters journaled to travel approximately in front of the first-named disks, and to enter the ground so as to resist the side thrust of the latter disks, means for supporting the first-named disks and permitting them to be turned and held at an angle with relation to the colters.

FARM TRUCK.—No. 676,972. June 25, 1901. J. A. Ashley, Yuba City, Cal. This invention relates to vehicles of the class used in gathering fruit in orchards and vineyards, or where movement or turning in a limited space is necessary, with small size, lightness, strength and rigidity, and ease of riding to prevent damage to the fruit in transportation over rough ground. The truck is formed with an arch at the front of the body, connecting it with the front axle, the forward end of the arch having an abutment directly over and upon the axle where the rear end of the body is supported upon springs secured to the rear axle. Stirrups are employed, in which the axle has a free, vertical, sliding movement, and means by which the stirrups are relieved from strains caused by the draft of the apparatus.

VINEYARD PLOWS.—No. 677,495. July 2, 1901. J. A. Bilz, Pleasanton, Cal. The object of this invention is to provide gang plows, which are designed to work between regularly spaced rows of vines or trees, and it consists in a novel construction and arrangement of plow frames, standard bearing sockets, journal-boxes of the wheel axles and adjusting lever mechanism whereby the location of these parts may all be shifted or reversed in a single apparatus, and the plows may be first used to throw the earth away from the rows, and afterwards adjusted for a second plowing to throw the dirt towards the rows.

PROCESS OF PRESERVING MILK OR CREAM.—No. 676,996. June 25, 1901. A. V. Russell, San Francisco, Cal. This invention is designed to preserve milk and cream so that it may be kept indefinitely without deterioration and at the same time retain the natural sweetness and actual flavor of the original product. It consists in heating the cream or milk, sealing it at the same temperature, increasing the temperature to a degree above the normal boiling point, and at the same time maintaining an exterior pressure sufficient to prevent the formation of vapor and avoid ebullition in the can, and finally suddenly cooling the sealed product.

PORTABLE WINDLASS.—No. 676,994. June 25, 1901. Michael O'Keefe, Vallejo, Cal. The object of this invention is to provide a comparatively light, powerful, portable windlass which is easily adjustable temporarily with relation to an anchor or fixed point and a part which is to be moved by the operation of the windlass. The device may be used for raising telegraph or other poles, or for moving cars and for similar purposes. It comprises a winding drum, gears connected therewith, a crank shaft, pinions mounted thereon and engaging the gears, a rope adapted to wind about the drum, a sleeve upon the crank shaft and a guide carried by the frame through which the rope is directed in winding and unwinding.

NON-REFILLABLE BOTTLE.—No. 676,715. June 18, 1901. F. Franz, San Francisco, Cal. This invention relates to a device for preventing the refilling of bottles and like packages, and in conjunction therewith of a means whereby the closing valve is opened by positive action when it is desired to discharge the contents of the bottle. The device consists of a cap with an annular disk closing the upper end interior to the neck, said disk having an upturned flange around the central opening. A rod is guided and slidable through said opening having a disk fixed upon its upper end and a valve intermediate of the two disks which is adapted to close upon the opening. Above the disks is a conically-shaped chamber having a ball contained within the cone, and this ball will rest against the upper disk and maintain the valve in closed position as long as the bottle is in anything but an inverted position. When thus inverted the ball rolls into the upper end of the cone, and the valve may be opened either by its own gravitation and the pressure of liquid, or a movable weight slidable upon a guide rod may be adapted to contact with the valve and force it open.

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California at the Pan-American.

At the meeting of the State Board of Trade in this city last week some very interesting statements were made about the California display at the Pan-American Exposition at Buffalo, N. Y. According to a report in the Call, Mr. W. H. Mills, who has just returned from Buffalo, described what had been done and discussed the probable benefits that may be expected. He made the striking statement that all the horticultural exhibits of the Central and South American countries, and also of the other States of the Union, if combined in one collection, would not be more than 20% of the California offering to the public at Buffalo. Indeed, so strongly does California preponderate in the horticultural building that the structure is commonly called "the California building." The California exhibits occupy 35% of the entire floor space.

A written report was also received by the Board of Trade from Secretary J. A. Filcher, who had charge of the installing of the California exhibit, and who is now in charge of it. He wrote that in spite of leaky roofs, bad weather and other difficulties that were aggravating the installation for California is complete.

THE BEST EXHIBITION.—"We have easily the best exhibition in our line at this Exposition," wrote Mr. Filcher. "In the aggregate we show practically every product and possibility of the State, and the arrangement and color blending are such as to make at once a striking impression upon the visitor. The beauty of our display and the excellency of our products seem to have been spoken of abroad by returning visitors. Newcomers on entering the grounds for the first time are frequently heard to inquire for the California exhibit as something, we learn upon inquiry, they have been told to be sure to see."

Mr. Filcher also reported that Buffalo affords the best opportunity for placing reading matter of any place that he has found in his round of expositions. There is no reasonable limit to the amount that can be profitably disposed of.

Mr. Mills and Mr. Filcher agreed in the statement that while American travelers are fairly conversant with conditions in California, the great mass of Americans have much to learn regarding this State, and that this is a remarkably favorable opportunity to educate them. Mr. Mills also made a statement concerning a new and interesting method of providing information about such conditions as concern intending immigrants to California that the Southern Pacific Co. has adopted and is about to put into practical use. A book has been prepared which is made up of the statements of practical agriculturists residing in different parts of California, in which they narrate their personal experiences as producers, and incidentally tell how profitable they have found this State as compared with the localities in the East in which they formerly resided.

Mr. Mills said that all parts of the State were not treated of in the forth-

coming volume, for that would have made a volume too bulky for use, but all sections of California will be treated in the same way in other volumes.

The average daily attendance at the Buffalo Exposition has been about 38,000. Probably the expectation of the management of the Exposition that there would be a total attendance between the initial opening and the final closing of the gates of 15,000,000 to 16,000,000 will not be realized. The attendants of the most value to California, in the sense of being possible future dwellers in the State, will not appear at the Exposition until after the haying season is over in the East, these being the agriculturists.

Mr. Mills said that Buffalo is well situated to catch visitors, being on the line of travel between the East and the West. Thousands of visitors see the show, by taking lay-over tickets, who would never visit it if they had to go out of their way to reach it.

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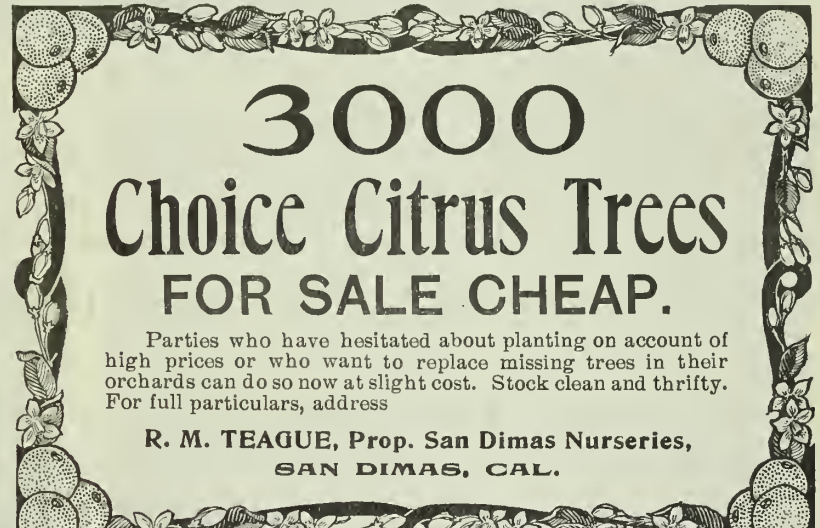
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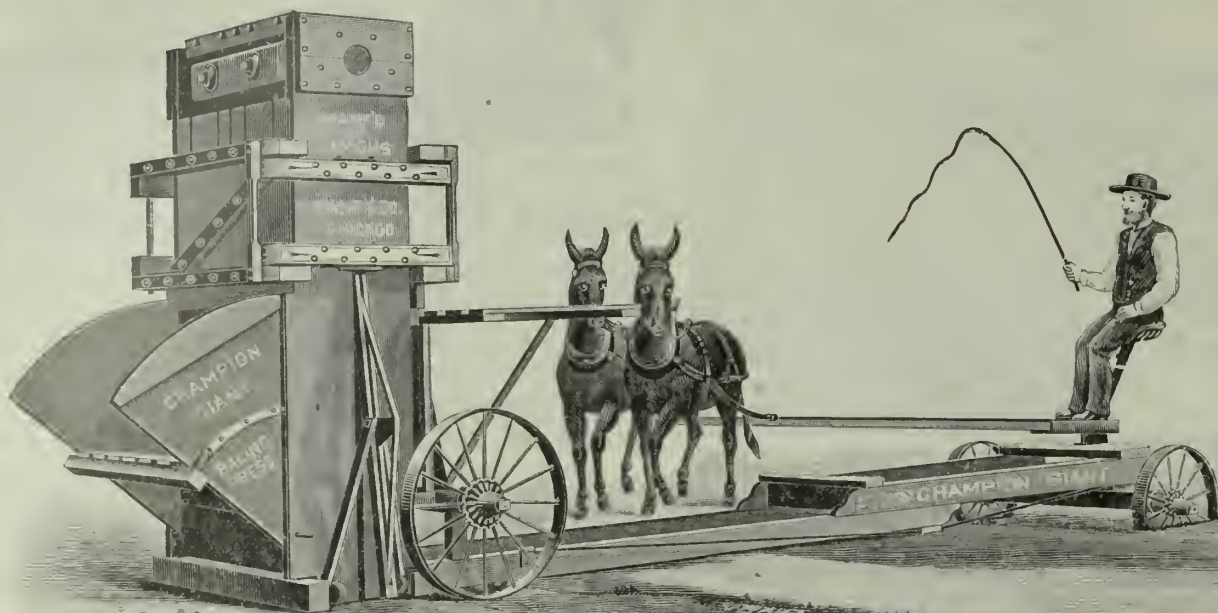
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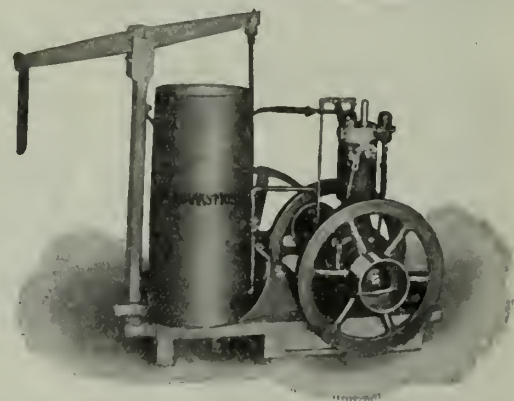
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 4.

SAN FRANCISCO. SATURDAY, JULY 27, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Field Crops.

Reference to the sugar beet crop is timely because all is now being rushed into readiness for it. The railways are convinced that they need more beet cars and a large number of "sides" to be used upon flat cars are being prepared. The crop will not be a full one, for the uneven seasons are still affecting a portion of our beet lands and machinery will not be used up to its capacity. Still there will be a large sugar product—plenty to make the makers active in their issue with the sugar trust, to which reference was made. One of the pictures on this page shows a sugar beet of good form. Its weight is about two pounds. It is the comparatively small, slim and shapely beet which carries the high sugar percentage, other things being equal, and selection toward the form shown has been long made by seed growers. This root is quite in contrast to the conventional beet. Another point which is involved in sugar content is ample foliage, and the picture shows the slim beet under its glorious canopy of vigorous verdure. The smaller picture in the beet line is also suggestive. It shows the topping of the beets in the field as some do it. There are various ways; and this sitting down, as we all used to do at the old corn-husking, is not the quickest way to top beets. It may be easier on the back and the knees, but these things do not count in up-to-date beet growing.

Another view shows a field crop which has been much mooted and yet has not yielded as great rewards as were anticipated. It is the tanner's dock or canaigre—a wild plant of southern

California which was so much sought for a few years ago that there was much interest in undertaking its growth as a field crop. The view is at the University sub-station, near Chino, where an acre and a half of the roots were planted out in February, 1895; the soil a very light, sandy loam with considerable gravel. During seasons of abundant rainfall the plants made good growth and produced tubers of 5 to 8 inches in length, but during recent dry years



Topping Sugar Beets.



An Ideal Form of Sugar Beet.

the plants did not make growth enough to mature seeds. The picture shows the plants in a fair year and the tall, dock-like seed heads are clearly seen.

When the year is dry the crop must be foregone or irrigation must be resorted to bring it out. The plant is naturally fitted to endure drouth, for the root may long remain dormant in dry soil and start growth when moisture favors. The drouth has forced a considerable acreage to lie dormant and anticipated returns have been postponed. The crop even at best has hardly proved as remunerative as estimated, and seems to need brightening somewhat to be very attractive to

planters. Another rare crop of which much has been talked is the soy bean. How the plant grows is seen by the picture, which also was taken at the University station, near Chino. The soy bean is an Asiatic legume and has been grown in a small way by Chinamen on the tule islands and elsewhere for years past. It has not shown very great adaptability to dry heat, and still is probably the best of the bean group under trying circumstances. The crop shown in the picture was drilled in between the trees of the young plum orchard. The land had been irrigated by the block system, and was in excellent condition. The beans were cultivated with a beet cultivator until the vines shaded the ground and were too high to pass under the frame of the implement without injury. They came into bloom during August, when the thermometer ranged from 90° to 108° Fahr. for

twenty-one days. During this time beans set, and 65 pounds of seed were harvested in the fall from the one-fifth of an acre, or at the rate of 325 pounds per acre. About 10% of the vines were killed by go-phers before they matured. The plants attained a height of 3½ feet. They received no irrigation after being planted. Soy beans can be recommended as a valuable plant for stock feed.



Canaigre at the University Sub-Station, Near Chino.



The Soy Bean.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, July 27, 1901.

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## The Week.

The great visitations are over and the city would drop quickly back into regular summer habits were it not that the strikers of various kinds and degrees keep things somewhat unsettled. The aggregate of visitors was somewhat less than first estimated. One measure of the shrinkage may be had in the report that of 12 miles of track made available for the storage of cars awaiting return to the East, not more than 5 miles were at any time occupied. Other providings were also untaxed to their full capacity as various city purveyors can testify. However, we are very thankful for what we received and hope similar emotion was awakened in the hearts of the visitors. The enterprise of several counties and interests in making display of productions at the assembly was very creditable and the displays themselves greatly enjoyed.

The week's weather, as described elsewhere, has proved very satisfactory from an agricultural point of view, and in sharp contrast to the grievous affliction visited upon men and crops by the extremes of the regions east of the Rocky mountains. Serious reductions of crops must result. Current supplies of esculents have been destroyed and shipments from this coast, even from as far north as Idaho, are being made to relieve the deficiency at the Mississippi valley centers. It has been a summer of great trial at the East in many ways.

Wheat is higher, but little is doing. No ship has cleared for two weeks past. High freights and strikes at loading points have discouraged shippers. The freight outlook is not promising, for though more tonnage is on the way than formerly, more is now required, owing to the great variety of sea business within reach of this port. Wheat now finds many competitors for a place in a ship. These local conditions are offsetting the influence of crop losses in the central west, which should cause advances here. Barley is a little stiffer, but shipping is checked, as with wheat. Choice feed barley is, however, rising in value to the level of shipping grades, and there is greater firmness in all barley feeds. Oats are in better shape, owing to freer buying for Government account. Corn is out of sight. There is little doing in beans, except that pinks have slightly improved, for the main bean trade seems to be awaiting the new crop. Bran is scarce and high and all mill-

stuffs against the buyer. Hay has been rather weak and lower, because of freer arrivals. Beef and mutton are quiet and steady; veal, lamb and pork firm; few hogs are arriving. Butter and cheese are quiet and slow; butter is watching its chance to come out of storage and the fresh product is hampered thereby. Eggs are also quiet. Too many Eastern eggs are visible; they are being pushed here on favorable terms to receivers because they can not be used or safely stored in the Eastern hot time. Poultry is demoralized. There is hardly any demand, and stocks, though not large, are still excessive. The week's demand for poultry was evidently overestimated. Potatoes have done fairly in spite of the draying difficulties. Yellow onions are firm and a little higher, but red onions are not wanted. Fruit is distressed by the troubles in transportation cited below, and values of large lots are much unsettled. The crush here was met by checking shipments or diverting them, but it all means hardship to the growers. Though limes are now lower, lemons have advanced and the few Valencia oranges available have sold better than recently. Raisins are cleaning up well. There is little doing in prunes. Reports are being circulated of September contracts of outside prunes at low prices, but the outlook seems clearly for higher prices. Wool was going well until the drivers' strike, but is now almost motionless. Stocks, however, are low and likely to go well when hauling is again assured.

Governor Gage has appointed Assemblyman John A. Bliss of Alameda county a member of the State Dairy Bureau, vice the late George W. Burbank. Mr. Bliss takes much interest in the appointment and will make a great effort to render the State provision for the promotion of dairying as effective as possible.

We have apprehended that the labor troubles during the harvest season might strike the agricultural interest very hard at some point. This seems to be reached in the quarrel between the city draymen and their drivers. City commission firms and retailers who had their own teams and wagons have been able so far to keep the fruit moving into sale; but the canners, who trust to draymen to move their supplies from the wharves to the canneries, have been unable to get their materials into place. Shipments to the city have therefore been stopped at supply points or diverted to canneries in places where hauling is possible. Some fruit has gone to the Alameda county establishments and to San Jose. This diversion has not amounted to much so far, but if the strike should continue, and if the stevedores should be drawn in, as some apprehend, there would be serious reduction of the output of the canneries and incidental losses all along the line. This is an interference with production and manufacture which should not be possible. Perishable products en route should be protected from detention as are the mails and army supplies. The growers' road to market is vital to his enterprise. It should not be closed to serve the interest of any one.

Prof. Koch of Berlin, in whose name countless cows have gone to destruction, seems inclined to lift the heavy burden which his great discoveries have placed upon the bovine race. At a great "Congress of Tuberculosis" in London, on Tuesday of this week, Dr. Koch made an address which shows how far the crusade against dairy cows was senseless and a grievous wrong to a most important interest. According to the cabled reports, Dr. Koch said his experiments had satisfied him that human tuberculosis and bovine tuberculosis were radically different diseases, and that he had amply demonstrated that cattle could not be infected with human tuberculosis. The counter proposition that human beings were not liable to infection from bovine tuberculosis was hard to prove, the doctor said, owing to the difficulty of experimenting upon human subjects, but personally he was satisfied that such was the case, and he recited at length post-mortem evidence supporting this belief. Continuing, he said that human immunity to bovine infection disposed of the belief of infection through dairy products, and he considered this source of danger so slight as to be unworthy of precautionary measures.

What a light this quiet declaration of the master

of bacteriology throws upon the sensational inferences of health officers and boards of health, and their frantic efforts to ruin property and inflame the public mind. The cow has been made the scapegoat for all the evil which men have done to each other, for Dr. Koch believes that man can only take the disease from the ejecta of his consumptive associate. Fortunately, however, the scare about tuberculous cows long ago began to vanish into thin air, and this showing of Dr. Koch will but mark its final disappearance. Of course no one desires to keep tuberculous cows and no one desires to drink milk from an animal suffering from this or any other disease, but it is an immense relief to know that one is neither giving death nor receiving it through the medium of dairy products.

Singularly enough the acquittal of the cow as source of tuberculosis to the human race is accompanied with the announcement from Paris that the hen may afford the cure for the dread disease. The innocence of the cow and the beneficence of the hen will be demonstrations of great value to the agriculturist. It is said that Parisian medical journals have recently been filled with accounts of discoveries of the value of eggs as a cure for tuberculosis made in the Academie des Sciences. Dr. Gehrmann, the health officer of Chicago, is not disposed in advance of his tests to accept the declarations of the French investigators, but he says that he will be thorough in his work to decide whether the hen is to be honored in the future as a great physician. Experiments will be tried on guinea pigs and rabbits.

And now the advantage seems to be on the side of the wandering sheep. He gets few good things in this life, but Judge Morrow of the United States Circuit Court in San Francisco has issued an order which will be of comfort to sheep men who use mountain ranges during the summer. Several of the mountain counties have a special tax of 10 cents per head on all sheep and lambs in the county owned by non-residents. A case was brought for an order restraining the Licence Collector of Sierra county from collecting this tax on 30,000 sheep owned by plaintiff. Judge Morrow granted the order on the ground that the tax is unconstitutional, as it discriminates in favor of resident owners and does not impose a license on hogs, cattle or horses grazing in that county and owned by non-residents.

The distressing spread of pear blight has been duly noted in our columns and discussion of recourses freely indulged in. Horticultural Commissioner C. S. Riley of Visalia is reported to have said that the pear orchards of the San Joaquin valley would soon be things of the past unless some means could be devised to check the ravages of the disease. He said that nine-tenths of the pear orchards of Kings and Fresno counties were affected. The blight is also spreading through the Tulare county orchards at an alarming rate, and Mr. Riley looks upon it as the most serious menace the fruit growers of that section have ever been called upon to face. We hope that the check to the disease, which Mr. Riley says is essential to the saving of the orchards, may soon be attained. But what it shall be it is difficult to say. So serious a trouble should first be known as thoroughly as possible, and to assist toward that end we publish on another page such exact information as the well-known expert whose name is attached to the article is able to provide.

There are on another page some interesting statements about the favorable reception which our fruits are meeting this year at the East. The quantity sent this year is less, for according to figures compiled by the freight department of the Southern Pacific, 1869 cars of green deciduous fruit had been shipped from California to the Eastern markets up to July 18th. The shipments at that date were 374 cars behind the record for the corresponding period of last year. The prices of a number of cars are given elsewhere; the bumper sale is, however, reported by Frank H. Buck of Vacaville, who is advised of the sale at Boston on Friday last of a car of peaches containing 1000 boxes, shipped by him, for the record-breaking price of \$2340. This is said to be the highest price ever paid for a single car of California green fruit, and indicates the Eastern demand for the California product.



QUERIES AND REPLIES.

Native Plums on Peach.

TO THE EDITOR:—I desire to graft or bud about one dozen ten-year-old healthy peach trees with native plums, that is, Chicasaw, Hortulana, Americana and Subcordata varieties. In the article on "Plums" in Bailey's "Cyclopedia of American Horticulture" the general statement is made that when it is desired to work plum on peach stocks budding should be done instead of grafting. In your work on "California Fruits" it is stated that there are some varieties of plums that do not make a perfect union with the peach, but evidently you consider such varieties merely an exception. Will you have the kindness to inform me whether you consider it advisable to graft or bud the native plums on the peach trees referred to? I prefer to graft if the chances for success are as good as in budding.—AMATEUR, San Francisco.

The propagation of plums of any kind upon peach trees involves two considerations: one, the agreement on the part of the plum to accept the peach as a stock—and that matter is referred to in the statements in "California Fruits," to which you allude. We cannot tell how the native plums you mention stand affected toward the peach root in that direction. The advice in Bailey's "Cyclopedia," that it is better to work plums by budding instead of grafting, refers not to the disposition of the plum, but to the difficulty of grafting on the peach. The peach is so ill-disposed to take a graft that even in working peaches on peaches grafting is seldom used, but the budding process is adopted as being more sure to take. The peach bark has something to do with this, for it shrinks and cracks badly after amputation, which is not the case with most other fruits. For this reason, if you undertake grafting at all on the peach, it is better not to split the stock, but to use the side graft, making the cut with a saw, according to the grafting method described on page 236 of "California Fruits," third edition. Some such method as this will have to be resorted to to make these plums succeed on the peach, even if they themselves are disposed to the union. We should, if at all possible, work by budding rather than grafting. You can operate sooner, too, by that method if you have satisfactory stock, because you can bud at any time during the next two months in the new wood of the peach, whereas grafting will have to be deferred until next spring.

Propagation of Fruits From Seeds.

TO THE EDITOR:—Is it possible for me to get seeds of fruits grown in California and have the same kinds from trees grown from them? It is difficult and perhaps dangerous because of insects to obtain trees or scions.—L. T. P., Lisbon, Portugal.

We have very little information as to which varieties of fruit can be expected to come true from the seed, because we have so little to do with that method of propagation. Really there are no fruit trees grown from the seed in this State except the English walnut, and even with this fruit grafting is growing in favor because of the constant desire to get perfect uniformity to the type which is most preferred. We know in a general way that some varieties of fruit come more true from seed than others. Our popular drying peach, the Muir, has that reputation, and yet no one thinks of trusting to it in propagation. We grow seedlings only for budding and grafting purposes. Experimenters with seedlings for the purpose of originating new varieties assure us that they get scores and even hundreds of distinguishable varieties from the seeds of one plant, and that these are mostly poorer than the seed parent, because of the constant tendency towards reversion to the wild type.

Strawberries on Adobe.

TO THE EDITOR:—Can strawberries be successfully cultivated on adobe soil? Two efforts have failed. Please state in the PACIFIC RURAL PRESS the preparation and management necessary to succeed.—H. D., Ventura.

We would not choose adobe for strawberry growing because of the difficulty of keeping the surface in condition to favor the growth of the plant; but if one has only that soil, and wishes to grow strawberries on a small scale, the effort is worth making. One way is to mulch the plants well with rotten straw to prevent surface evaporation and baking, which is very distasteful to them. Put on a cover of this

material several inches thick after making low levees around the bed so water can be run in as needed to distribute itself under the mulch. Late in the fall dig this mulch into the soil, keep clean during the winter and put on a new mulch next spring, etc. In this way the baking propensity of the soil will be overcome by the working in of the coarse material, so that after a time the mulching will not be necessary. Adobe soil can be improved at once by working in sand and by free use of old slaked lime at the beginning of the rainy season. Whatever is done, it must not be forgotten that strawberries must have moisture in moderate amount, but regularly applied during the dry season.

Prunes in Glass Houses.

TO THE EDITOR:—What is the best way to dry or cure French prunes? I have about eight acres of them and have a large greenhouse that is empty. Would it do to dry them there?—READER, San Rafael.

Prunes are cured in California on wooden trays exposed to the sunshine, usually by placing them upon the dry ground. You can probably cure more quickly and with perfect satisfaction by using your greenhouses, because this will assure you a higher degree of heat and protect the fruit from any moisture which might collect during the night. Curing would be facilitated under cover, as you propose, by arranging sufficient openings to allow the free escape of the moisture-laden air. It would hardly be profitable to provide glass houses for the curing of prunes, but where you have the house, without other use for it, it can undoubtedly be used to facilitate the curing of your fruit. We apprehend, however, that if you have any considerable crop this year you will grow very weary of carrying prunes into the greenhouse and out again, and will spread out the trays on the ground. Much was done some years ago in the effort to make sun-drying under glass practicable, but all devices failed for lack of capacity.

Tomato Blight and Corn Worms.

TO THE EDITOR:—Our tomatoes are all dying; the plants are of large size, with some fruit on, but the vine begins to wither and finally they shrink back to almost nothing. If you know a remedy please let us know as soon as possible, also the cause of the trouble. Do you know a way of checking the worms in sweet corn? They are very bad.—SUBSCRIBER, Merced.

The dying of tomato plants in the way you describe is due to the work of bacteria in their tissues. There is no way known of reaching these minute organisms which work in the very tissue of the plant, and which are believed to enter the plant from the soil. The only treatment now known to check the spread of the disease is to immediately pull up and burn plants which give signs of being affected. This seems to prevent the spread to other plants. To escape the germs in the soil, tomatoes should be grown upon new ground each year.

No satisfactory way has been found of preventing the appearance of worms in sweet corn. The late corn usually escapes because the moth does its egg laying before the ears are in condition, and some practice late planting with this end in view. The moth is known to fly to the light, and for this reason moth traps which expose a flame above and a pan of water on which a little kerosene is floating will undoubtedly largely reduce their numbers. No way of poisoning the plant, so that the worm may be killed before entering the ground, has yet been found practicable.

Yellow St. John.

TO THE EDITOR:—I forward you one ripe peach which no person here can tell the name of. The leaves in the package are from the same tree. Will you kindly let me know the name of it? It ripens here the first week in July, is of good size, flesh a perfect yellow, red at pit, and skin beautifully colored. The tree was on the place when I bought it, but no one seems to know where it came from. If I were sure it was a regular bearer I would graft it to a lot of worthless stock I now have. I think there is little doubt about a market for it, as it comes in between the early peaches and the Crawfords. What do you think of it?—S. J. IRVIN, Ceres.

The specimen suffered considerably in the mail, but seems to retain marks enough of the Yellow St. John to indicate that variety. This variety is of some service because it is the earliest of the yellow-

fleshed class. Its weakness is undersize, and it is not worth growing except for local sale in a very early locality, because otherwise the larger yellow peaches from early localities will soon oversell it. You may find it profitable at home, but your locality is not early enough to grow the St. John for the distant markets.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending July 22, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

Nearly normal temperature has prevailed during the week. In most sections the weather has been favorable for fruit and harvesting, but in Humboldt county the continued dry weather and drying winds have damaged root crops and grass. Grain harvest is progressing, and in most sections wheat and barley are yielding excellent crops. Hops, sugar beets and corn are doing well, and good crops are predicted. Apples are reported excellent in quality, but the yield in some places will be below the average. Deciduous fruits in Lake county were seriously damaged by the late spring frosts; it is reported that in one 200-acre orchard of pears and prunes there is not a pound of fruit. Citrus fruits and grapes are in good condition. There will be a large yield of pears in Alameda county.

SACRAMENTO VALLEY.

The weather has continued favorable for growing crops and for harvesting. Wheat is yielding fully up to expectations, and the quality is excellent. Barley, oats and rye will also yield good crops. Grain harvest is nearly completed in some sections. Hops are doing well, and give indications of a large crop of good quality. Grapes, walnuts and citrus fruits are in good condition, and are expected to yield fully average crops. Olives will be light in some places. There is some complaint of loss to shippers of perishable deciduous fruits through delays in transportation. Fruit drying and canning are progressing rapidly. Tokay grapes will be ready for shipment in a few days.

SAN JOAQUIN VALLEY.

Clear and warm weather, which was favorable for the ripening and harvesting of all crops, prevailed during the week. The grain harvest is progressing rapidly, and probably two-thirds of the crop has been gathered. The yield and quality are good. Very little grain is being shipped, most of it being stored in the warehouses. Deciduous fruits are ripening rapidly, and in most sections the crops are good and the quality excellent. Pears, plums and peaches are being shipped in large quantities, and canneries and driers are in full operation. Large shipments of green fruit are being made to Eastern markets. Large quantities of melons are being shipped. A large crop of figs is reported from the vicinity of Cutler. Table grapes are being marketed. The present indications are favorable for a large grape crop. The almond crop will be light. Water for irrigation continues plentiful, and stock of all kinds are in good condition.

SOUTHERN CALIFORNIA.

Hot days and cool, foggy nights during the week have been beneficial to beans and beets, but walnuts have been slightly injured by the heat. Oranges are in excellent condition and will probably yield a heavy crop. Walnuts will be nearly up to the average. The bean crop will be far below average in the vicinity of Los Angeles. Apricots, peaches and other deciduous fruits are very light, and tomatoes are below average. Grapes are in good condition. Harvesting and threshing are progressing. Grain and hay are yielding very light crops in most sections.

EUREKA SUMMARY.—Warm and dry weather continues ripening grain rapidly. Oat haying is well advanced. Vegetables and grain on high lands need rain badly.

LOS ANGELES SUMMARY.—Warm weather is ripening fruit rapidly, yielding better than expected in some places. Almond hulls show signs of opening. Corn and crops on irrigated land are looking well. Oranges are setting irregularly.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, July 24, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week.....	Minimum Temperature for the Week.....
Eureka.....	.00	.01	T	.07	68	50
Red Bluff.....	.00	.00	.00	.02	102	64
Sacramento.....	.00	.00	T	.01	98	54
San Francisco.....	.00	.00	T	.01	70	48
Fresno.....	.00	.00	T	T	108	62
Independence.....	.00	.00	.07	.01	98	62
San Luis Obispo.....	.00	.00	T	T	90	48
Los Angeles.....	.00	.00	.00	.01	88	58
San Diego.....	.00	.00	.00	T	72	62
Yuma.....	.00	T	.02	.14	108	78



## HORTICULTURE.

### Pear Blight in California.

By NEWTON B. PIERCE, Vegetable Pathologist, U. S. Department of Agriculture, Santa Ana, Cal.

Pear blight is a bacterial disease. In the Eastern States, especially in the North, infection of pear trees by the bacillus causing blight occurs mainly during the spring, while the trees are in bloom, and the blighting branches may be found more or less commonly during May and the early part of summer. In general infection of the trees takes place through the blossoms, though other points of infection occur. The period during which pear trees are in bloom is shorter in cold than in warm climates; hence the period favorable for spring infection in New York, for instance, is much more limited than in much of California. Both regions, however, show a spring epidemic of the disease.

**HOW THE DISEASE SPREADS.**—The germs causing pear blight are spread from flower to flower, tree to tree, orchard to orchard and section to section of country by insects, as long as the trees are in bloom. Chief among the distributors of these germs are the bees, which are busily engaged in procuring nectar from these flowers throughout the period of bloom, and which have the power of sustaining flight for considerable distances. These facts have been carefully demonstrated by M. B. Waite, of the United States Department of Agriculture, who has given attention to the study of this disease.

The organism causing pear blight multiplies rapidly upon the nectar disk of pear flowers and enters through these organs into the tender shoots, where its progress is rapid through the tender tissues of the bark or cortex of the branch. From points of infection it spreads rapidly both downward and upward, destroying the entire cortex as far as the germ is able to spread, or until the tissues become too hard or otherwise unsuited to its further progress. When the tender bark becomes filled by these germs the altered tissues, filled with bacilli, will ooze out upon the surface in sticky mucilaginous drops. Flies and various other insects visit these drops of slime and become more or less covered with the germs. They afterwards visit the flowers for nectar and the blossoms thus become infected. The bees now also become smeared with the organisms and begin the epidemic spread of blight from tree to tree. Mr. Waite has isolated these pear blight germs from the mouth parts of bees which were seen to visit infected flowers. The first spring infections arise from "holdover" cases of blight, which, when spring growth starts, give rise to the exuded drops of infected ooze or bacterial slime occurring upon the bark.

The only remedy thus far recommended throughout all the East is that of cutting out all infected parts, making the cuts some 6 inches below external signs of disease. While this method has saved many orchards from total destruction and is the most practical treatment yet known, it is far from satisfactory, and new light is earnestly hoped for by all interested.

**OCCURRENCE IN CALIFORNIA.**—For several years pear blight has prevailed in a typical manner in the Northwest Pacific States. The evidence of the presence of this disease in California, however, was faulty until within the last three or four years, although many earlier reports of its presence in several valleys of this State have appeared in the press. Within the past three years the disease has developed seriously in the southern portion of the San Joaquin valley and throughout much of the country south of the Tehachapi. While these widespread outbreaks have sharply distinguished the present trouble from the hitherto reported sporadic and local cases of the dying-back of branches, which were probably due in many, if not in all, instances to peculiar soil, moisture, or other local conditions, there have appeared characters in our later epidemics which still required explanation before the identity of the California pear blight with its Eastern namesake could be fully established. One of these abnormal characteristics of the California malady was the great amount of damage done by it to the orchards after the middle of November and onward till the middle of January, a time of year when little or no pear blight is active in the Eastern States.

**THE HANFORD INVESTIGATION.**—Several serious cases of this winter injury to pear orchards have been observed of late near Hanford, and the unusual time of development, together with the special location of the disease upon the trees showed the need for further study. An investigation was therefore undertaken to determine whether the cause of the winter blight of California is the same as the cause of spring and summer blight in the East, and why the disease developed during the winter in California. An orchard near Hanford which had been nearly destroyed by blight between the middle of November and the middle of January was visited the last of January. Samples of actively blighting branches and bark were obtained. From this material were isolated pure cultures of the bacillus causing the

blight, by means of poured potato gelatine plates, after my return to the laboratory. This organism could not be distinguished from bacillus amylovorus, the germ known to be cause of Eastern pear blight. Two fine 6-foot nursery trees of the Bartlett pear were procured, potted and placed in a sunny place in the laboratory. One of these trees was carefully inoculated at four points by means of a scalpel and platinum wire, with germs from a pure culture of the organism obtained from the winter blighted material procured at Hanford. The second tree was cut like the first but no germs were introduced in these cuts; it was left for comparison with the inoculated tree. At the expiration of a week evidence of infection was observable at three or four inoculated points on the first tree, while the second or control tree showed no evidence of disease. The fourth cut in the inoculated tree failed to become infected, probably owing to the dying out of the germs.

At the end of the three weeks typical pear blight had extended for a considerable distance upward and downward from the three points of inoculation where infection had occurred. The control tree showed no signs of disease. At the end of six weeks the inoculated tree was black and practically dead, to within a few inches of the ground. The control tree was fresh to the tip and showed not the slightest evidence of blight.

This is the first scientific demonstration of pear blight in California, unless some rebutting fact may have escaped my attention, and I believe may be taken in connection with the evidence obtained from the study of cultures as sufficient proof of the identity in cause of winter blight in California with summer blight in the East.

**THE FALL BLOOM.**—Having looked into the etiology of winter blight, it was desirable to determine, if possible, the reasons for the unseasonable development of this well-known bacterial disease. It was learned, through the sons of Mr. Clow of Hanford, that, at the time the pears were gathered in their orchard, the main limbs, up to a point five feet above the ground, bore many short twigs and spurs showing well-developed open flower clusters. This observation was fully indorsed by the pear growers of the region. It was also observed by the writer that nearly all the winter blight had occurred below the height of a man's head, about the base of the main limbs, and that most of the limbs were healthy above the point, except where spring or twig blight had extended down a few of the branches. The points of infection of these winter cases of blight could also be commonly traced to some short twig or spur near the base of the limbs. The writer, therefore, believes that the infections of winter blight usually take place through fall blossoms, and as these fall blossoms occur near the base of the main limbs, it is this vital portion of the tree which becomes infected at that season. As these late blossom spurs are mostly short, the time required for the germs to pass from the infected flowers into the main limbs is brief, too brief, indeed, for the discovery of infection in time to remove the spur and save the limb.

It is, therefore, very important that all unnecessary blossom spurs and twigs should be carefully cut from the base of the main limbs as early as they appear, up to a height above the more vital portions of the tree. In this way much of the infection of the larger limbs may be prevented, and water blight may be brought largely under control. Spring infections have very commonly run their course, been cut out, or dried out by the heat of the summer before winter blight begins. If, therefore, the main limbs are kept free from short blossom spurs, winter blight may be largely prevented, while spring infection, twig blight, will be largely confined to smaller branches, which are readily remove, if taken in time, without serious injury to the tree.

Not all affected pear orchards in California suffer from winter blight, as not all orchards develop fall bloom. It is a fact, however, that the conditions in California are such that there is often a tendency for trees to make a fall growth after the crop is gathered and upon the occurrence of fall rains. This is, perhaps, especially true in those orchards situated in low alkaline positions, and the pear is commonly selected for planting in such situations. In addition to this is the fact that many winters are mild, and the tissues of the trees do not harden as perfectly as in colder climates, nor is there sufficiently low temperatures to kill the germs inducing the disease. It is, therefore, not strange that serious injury is done to the trees in the late fall and winter through fall infections and by renewal in activity of those cases of spring blight not entirely killed during the dry summer months.

### The State Board of Horticulture.

The last meeting of the State Board of Horticulture, briefly mentioned in last week's PACIFIC RURAL PRESS, is more fully sketched by the Record-Union as follows: Thomas A. Hender of Tuolumne county was seated a member of the board from the El Dorado district, to succeed W. B. Gester.

The report of George Compere, the expert appointed to visit foreign countries for the purpose of

securing parasitical insects, was received. It was voluminous and its reading consumed two hours. It was, according to members (the meeting was executive), full of valuable information.

The matter of the election of a secretary of the board to succeed the late B. M. Lelong was called up, but the recently appointed members had had neither time nor opportunity to inquire into the fitness of the several applicants for the position, and at their request a recess was taken until 8 o'clock. After the recess the new members were still undecided, and urged a postponement of the election to a meeting to be called by the chairman. After some discussion their wishes were deferred to.

State Quarantine Officer Alexander Craw has, since the demise of Mr. Lelong, been acting as secretary, without salary, and it devolves upon the president to appoint a secretary pro tem. R. D. Stephens offered a suggestion, which will probably be followed, that none of the applicants for the position of secretary be appointed to temporarily fill the office. The meeting adjourned to the call of the president, Ellwood Cooper.

## FRUIT MARKETING.

### The Foreign Walnut and Prune Crops.

**TO THE EDITOR:**—The accompanying reports, received through the Pacific Commercial Museum of San Francisco from the United States consuls abroad, in compliance with the oft reiterated request of the California fruit growers, should be published in journals read by the fruit growers.—EDWARD BERWICK, Monterey.

#### SPECIAL CONSULAR REPORT FROM MARSEILLES, FRANCE.

**WALNUTS.**—The standard walnuts offered for export from Marseilles are known by the following designations, which are arranged in the order of their generally accepted excellence: Pure Mayette, Mayette commercial or courant, Parisiens, Franquettes, Rondes and Chabertes—the foregoing being variations of the so-called Grenoble walnuts, Marbots first choice, Marbots second choice, Cornes, Cahors, Levantines. The last-named walnut, as its name implies, is received here from the Far East and re-exported.

The Mayette is considered the finest of the French walnuts and as a rule sells for 5 francs more per 100 kilos than any of the others, and as much as 20 francs more than the Marbots. The Marbots are grown in the vicinity of Bordeaux and are usually exported from that port.

I now have definite advices that the crop prospects are good, especially in the department of Isere.

**PRUNES.**—Referring to your observations on the subject of prunes, I have to say that you are correct in your belief that the distinctions are a little closer in France than in the United States, and the classification is as follows:

	Per demi-kilo.
1.—Imperial Fleur.....	45
2.—Imperial.....	50-55
3.—Surchoix.....	60-65
4.—Choix.....	70-75
5.—Demi-Choix.....	80-85
6.—Rame Supérieure.....	90-95
7.—Belle Rame.....	100-105
8.—Rame ordinaire.....	110-115
9.—Petite Rame, in barrels.....	120-125
10.—Fretins, in sacks or barrels.....	140-150

Some of the high-grade prunes are dropped into boiling water for an instant and then dried, in order to bring about the silvered appearance which causes them to be sought in the market. Crop reports are meager, but indications are all very good.—ROBERT P. SKINNER, Consul General, June 27.

#### SPECIAL CONSULAR REPORT FROM GRENOBLE, FRANCE.

**WALNUTS.**—In compliance with the Department's instructions, under date of May 21st last, calling for regular reports on the walnut trouble in Grenoble, I have the honor to submit the following:

It is early yet to pronounce opinion as to what will be the probable extent and quality of the growing crop of walnuts in this district this year, as everything will depend greatly on weather conditions between now and gathering time. It is, however, an established fact to-day that the output will fall considerably short of last year's production, although by exactly how much it is difficult, if not impossible, to determine at present. Some interested parties pretend that it will be reduced by at least one-half, if not more; but from inquiries I have made among dealers and growers competent to judge, and from my own personal observations on the spot, a medium crop may be expected, provided always that circumstances continue favorable; but nothing positive can be known on the subject until July 15, on or about which date I shall make it my duty to furnish another report on the situation.

Until quite recently prospects were promising for a good crop of walnuts in the Isere valley, as the trees were showing well and appeared to be fairly hung with young nuts, still very small, as agriculture is in a backward state in these parts, owing to late



frosts and the cold experienced here in March and April. Fine summer weather had prevailed for several weeks previously, causing vegetation to prosper greatly; but toward the end of May it began to get abnormally hot and sultry, which led to violent thunder storms about June 11th, followed by heavy and continuous rains, culminating on the 14th in a rather severe cold spell for the season (we experienced such weather as might be expected in March), which lasted until June 17th, thus changing in the space of a few days what was a short time before a very encouraging outlook. Fruit crops especially have suffered considerably from this state of things, and will be greatly reduced in consequence. With regard to walnuts, it appears from all accounts that many of the young nuts have withered and fallen off; but as the weather now seems to be gradually clearing and becoming fine and warm again, further damage may be avoided, for the present, at least.

Immediately I hear of any contracts being concluded for further delivery I will at once report same, as well as prices paid, although I do not anticipate that any transactions of the kind will be effected just yet, many dealers having been hard hit last season by being too previous. Competition, however, is very keen in the trade, and it is possible that some enterprising speculator may shortly come forward and endeavor to monopolize, as was the case last year, and thus start prices.—T. W. MURTON, U. S. Vice-Consul, June 18.

#### SPECIAL CONSULAR REPORT FROM BELGRADE, SERBIA.

**PRUNES.**—The present prospects for the prune crop in Serbia are very bad indeed. In Schabatz, the most important district for prunes, they do not expect more than half of last year's harvest, which was not a good one. In the other districts, which are not so important producing centers, the prospects are a little better. The stocks of last year are very small. All in all, the growers and dealers have not more than 60,000 kos. (600 tons).

Regarding the quality, it is impossible to give any information now, as it is too early.—CHRISTIAN VOGELI, Vice-Consul General, June 11.

#### This Year's Eastern Shipments.

"There has not been so continuously well-sustained a market on California deciduous fruits in many moons as the present season shows," was the reply made by George B. Katzenstein, manager of the Earl Fruit Co., when asked by a Record-Union reporter as to the result of the present season's shipments of fresh fruits up to date. Continuing, he added: "I do not now recall an equally satisfactory season as a whole. Prices at auction have steadily advanced with the season, and the week just closed records the highest realization of the season. Omitting all reference to f. o. b. sales, which have been phenomenal, and smaller markets, the record of the Earl Fruit Co.'s sales in what may be termed the leading auction points for the past week, on a half-hundred straight carloads of fruit, is as follows:

"New York, 18 cars sold—Average \$1528 per car.  
 "Chicago, 13 cars sold—Average \$1353 per car.  
 "Boston, 11 cars sold—Average \$1392 per car.  
 "Philadelphia, 4 cars sold—Average \$1393 per car.  
 "Pittsburg, 3 cars sold—Average \$1446 per car.  
 "Montreal, 3 cars sold—Average \$1550 per car.  
 "The general average on the entire week's sales is \$1442 per car.

"Contrary to all expectations," added Mr. Katzenstein, "peaches—of which there is a fine full crop in the State—have commanded premier figures, and is the only fruit the shipment of which during the present season exceeds that of last. Up to and including Saturday's shipment, or during the first twenty days of July, 319 cars of peaches were billed from California, as against 259 during a corresponding period last year. Up to and including the date last mentioned, there were shipped in 1900, of deciduous fruits, 1251 carloads, as against but 913 for the present season, showing a shortage of 338 carloads up to date."

As to reports of the Eastern peach crops, Mr. Katzenstein remarked that the information received was conflicting. "Undoubtedly," he added, "Georgia, which is our chief competitor, is now marketing a large crop of peaches, the bulk of which will reach destination during the coming week, when probably 800 carloads will be distributed, and, in a meteoric way, the output will as rapidly diminish.

"Climatic conditions have seriously impaired the condition of the fruit, which shows increasing rot. As against the fine, firm and hard stock which California is supplying, with its proverbially excellent keeping qualities, there is little to fear. With the peach competition largely removed, forecasting the future, therefore, there is nothing serious to apprehend, and the season will close as it has opened—receptive, strong and eminently satisfactory."

It is estimated that under proper supervision of the cutting the forest reserves of the United States might be capable of supplying nearly a fifth of the annual consumption of lumber at the present existing rate.

## THE DAIRY.

### Southern California Dairymen's Association.

Address by PRESIDENT C. H. SESSIONS at the meeting in Los Angeles last week.

I wish to congratulate the members of this Association on the outlook for the most prosperous season we have had for several years. The last winter's rains were so abundant as to insure good crops in every branch of farming. Those farmers producing milk have received good prices for their milk at both creamery and cheese factory and the prospects are good for satisfactory prices during the balance of the season. The demand for milk and cream for city delivery has had a tendency to shorten the supply at the creameries and has helped to keep up prices of milk, which earlier in the spring bid fair to be cut to a low point.

**THE HERDS.**—Milk cows have sold at very high prices during the past several months, and many farmers have sold off their herds at a good profit and will wait until their young stock comes fresh, when they will again become milk producers. During the very dry years many cows were weeded out of herds and sent to the butchers, and now the herds will average much better in the production per cow and a corresponding increase of profits.

The dry years have not been without their blessings by making farmers do more planning than formerly, and I believe they are in better condition to do business profitably than ever before.

**ORGANIZATION.**—The Creamery Board of Trade has been organized over a year and been very successful in its work. The weekly meetings have been well attended and the market conditions well discussed before action was taken on prices. The Board of Trade has been of great benefit to all milk producers, as it has kept the price of butter where it would sell readily and not accumulate and be sold later at cut rates.

During the past winter great quantities of butter have been brought in to supply the trade which the southern milk producers could not furnish.

The Board of Trade is made up of twelve of the principal creameries of Los Angeles and Orange counties. They put up under the Board of Trade "trade mark" about two and one-half tons butter per day and still cannot supply the demand. For a short time in the spring and early summer a surplus may accumulate, but this is partly caused by not having butter enough earlier in the winter and having to bring quantities from the north and east, which, when once started, is hard to shut out as soon as we have a sufficient supply. If this is true, then the farmers have the remedy in their own hands. Let them furnish a larger supply of milk when it is so badly needed and the price is high and they would have a better control of the market.

With the increasing demand for local butter and the quantities of foreign butter brought in, the conditions are first class for every one to increase their herds and their supply of milk with no fear of overstocking the market for some time.

**DAIRY SCHOOL.**—At the last Legislature an appropriation was allowed the State University, which enables them to take the first steps toward a dairy school. It was not as large as needed, but it makes a beginning, and we hope at another session they can secure enough to put up the proper buildings and have a good working herd in addition to the school and creamery work. The school will open early in October and continue for eight or ten weeks. Instruction will be given in butter and cheese making in the most up-to-date manner, with laboratory practice also in general farming, in the management of herds, the breeding and feeding of animals and veterinary practice.

**FARMERS' INSTITUTES.**—Farmers' Institutes will be held at Clearwater and Gardena between the 10th and 15th of August. Prof. Cook will have charge of them, and Prof. Anderson of the State University is expected to be present. Prof. Anderson is the new instructor in dairy husbandry, and is better posted on such matters than any man we have had to lecture to us. He was at El Monte, Downey and Compton last December, and all who heard him were well pleased and none can afford to miss his talks at this time.

We can ask all manner of questions in regard to selection, breeding and feeding of stock, and the care and handling of milk and about any troubles we may meet in our business and expect an answer that will benefit us.

**IMPROVEMENTS.**—The Supervisors of Los Angeles county are in sympathy with the movement to put watering troughs along the county roads where they are needed and where water will be furnished. These ought to be located near houses on account of the damage done to pipes, faucets, etc., by tramps or thoughtless boys. They are also willing to put up sign posts at road corners giving the names of the roads. I trust the farmers will impress on the boys the fact that these signs ought not to be interfered with, as they are put there to guide the stranger, and not as targets for rocks and shotguns. A few

words to the boys would probably prevent any injury to them.

**TO BE OR NOT TO BE.**—We have met to-day to elect our officers for the next year, and before taking that step I think it would be well to discuss the matter and ascertain whether it is best to continue as an organization or to drop it after being seven years in the field.

When we first organized there were several important legislative matters to be looked after, and great interest was taken by all the milk producers, but latterly they have lost interest and only the officers have kept it alive.

We formerly held dairy meetings in different sections with great success, but the Farmers' Institutes, with their better array of talent, have taken the place which we occupied, and there does not seem to be the call for us that there used to be.

The Creamery Board of Trade, holding the position, and being so closely connected with the milk producers, can look after the legislative matters which will come up from time to time.

With these facts before you I will leave it to the members to decide whether or not they consider it best to continue.

**ASSOCIATION TO BE CONTINUED.**—After Mr. Session's paper considerable discussion followed, taken part in by Messrs. White, Miller, Moore, Smithers, Hamilton, Ridgeway and Niles. Put to a vote, it was unanimously voted to continue the association.

The officers were re-elected as follows: President, C. H. Sessions, Los Angeles; first vice-president, George H. Peck, Pasadena; second vice-president, A. C. Smithers, Los Angeles; secretary, H. G. Hamilton, Los Angeles; treasurer, George E. Platt, Los Angeles; directors—J. J. Harshman, Compton; Carl Raab, El Monte; J. L. Starr, Los Angeles; Guy H. Miller, Riverside; William Niles, Los Angeles.

#### A Southern California Dairymen's Methods With Milk Fever.

By C. S. BURGESS of Arlington, at last week's meeting of the Southern California Dairymen's Association.

I do not profess to be a veterinarian, but have had quite an experience with milk fever for the past twenty years, and have been all this time trying to learn some way to cure it, and I believe I have succeeded.

I remember the first case I ever had. It was many years ago, and several of my neighbors were called in to my aid. Some called it one thing, some another, but no one at that time thought it milk fever. The prevailing opinion was the cow had "hollow horn." So holes were bored in her horn and turpentine inserted, and for fear her tail was hollow or something of that kind, I was directed to split the end of it and insert in the split a few teaspoonfuls of salt and pepper. I did so. After all had given up and gone home I thought I'd try my hand, so took a hose and gave her a cold bath. Well, she died. Guess she'd have died anyhow!

Since that time I've tried every remedy read or heard of, including Schmidt's treatment complete. I gave it to them complete, but they didn't want to stay in the dairy business. Now I have what I believe to be a scientific treatment, and should this fail my hopes are all gone.

The very first thing I would do is to get some water boiled, so as to have that ready. Have some one else see to that, so as to occupy none of the operator's time. Take the temperature of the patient via the rectum; 101½–102 is normal temperature, 45 normal pulsation, of a regular, even throb. Any condition of either pulse, temperature or respiration—which should be easy and natural—should be noted. If pulse is irregular, jerky and uneven, or very weak, and temperature down to 80 to 96, give immediately hypodermic injection of 1½ grains strychnia nitrate, 2½ grains digitalis pure. Repeat dose of strychnine not oftener than one hour, the digitalis not oftener than four hours. The dose given is a maximum one, and must be regulated according to size and condition of the cow. If temperature is below normal, pulse weak and irregular, you must know the condition of your patient, then act accordingly. If one hypodermic injection raises the temperature to above normal, you are making progress. Do not repeat the dose unless temperature drops below normal. When you are doing well, let well enough alone; overdosing is dangerous.

Now, take two-thirds of a-pail of hot water that has previously been boiled. Into this put a teaspoonful of permanganate of potash. As soon as water is cool enough for you to bear the hand in, insert a rubber tube into the uterus and thoroughly irrigate with this solution, which is absolutely safe and is one of the very best antiseptics known to the medical profession—a wonderful germ destroyer. After the solution is all used, wash out the parts with tepid water.

Now remove all excrement from the rectum by inserting hand and arm. Then give thorough irrigating with warm water and soapsuds, using same instrument as for vagina and womb. At least a pailful of water should be used.

Now use the Schmidt treatment, which consists of thoroughly washing udder after milking out dry. Dissolve in boiling water one to two quarts, into



which has been dissolved two drachms potassium iodide; inject into each teat one-fourth of this solution. After this is done, thoroughly knead udder once each hour; do not milk out for forty-eight hours. I might add: force into udder all air possible by pouring a funnel full and then allowing it all to run out; then pour in more, continuing this way until all of the solution, excepting any dregs that may be in bottom of vessel, is used.

After this is done, apply fully one pint of spirits of turpentine over loins, rubbed well in. If cow does not urinate in six to eight hours after treatment is commenced, draw off urine by inserting hand into valve a few inches. You will find mouth of bladder bottom side toward feet; insert catheter and run off water. Keep patient propped up by bolstering up with sacks containing chaff.

Change her position by rolling her over once in ten or twelve hours; keep her as comfortable as possible, in shade, and protected from winds and drafts.

Do not force her to eat. She will eat readily enough as soon as her digestive system is ready for food; feed sparingly until normal strength and vigor is attained.

I might add be very careful that all instruments used are absolutely clean. Drop hypodermic needles into hot water; also glass that is used to insert into uterus.

I am confident that inside the womb is where the trouble begins and ends with death, unless thoroughly cleaned—germs destroyed. They are caused by clots of blood that are retained. Septisemia sets in just the same as with women with puerperal fever, and is treated the same, except, perhaps, the potassium iodide. Whether or not it is necessary to use this with the cow I cannot say. I have been successful with it in connection with the full treatment, as described. What has been done once can be done again. I would be willing to guarantee a cure or no pay. I have faith in the treatment. It eclipses everything else I know of. I hope my brother breeders and dairymen may profit by my experience.

### Three Ways of Feeding Milk to Calves.

D. H. Otis writes that twenty head of grade Short-horn and Hereford calves were purchased by the Kansas Experiment Station in the spring of 1900 and divided into two lots. One lot was fed on sterilized creamery skim milk with a grain ration composed of equal parts of corn and Kafir cornmeal, with all the alfalfa hay they would eat. The second lot was fed the same as the first, except that fresh whole milk was used instead of skim milk. In addition to these two lots, the Station secured the privilege of weighing twenty-two head of high-grade Hereford calves which were running with their dams in a pasture near the Experiment Station.

**RESULTS WITH SKIM MILK.**—For the twenty-two weeks under experiment the ten calves consumed 24,736 pounds of skim milk, 1430 pounds of corn chop, 1430 pounds of Kafir cornmeal and 641 pounds of alfalfa hay. The total gain was 2331 pounds, or a daily average of 1.51 pounds per head. Figuring skim milk at 15 cents per 100, grain at 50 cents per 100 pounds and hay at \$4 per ton, the total feed cost of raising these calves was \$52.63, or \$5.27 per head. The feed cost for each 100 pounds of gain was \$2.26.

Cows that are milked will produce larger yields than when suckling calves. According to the average yield at this Station, ten cows (one for each calf) produced 55,540 pounds of milk testing 3.93% butter fat. With butter fat at 15½ cents per pound, this would amount to \$338.52. The value of the skim milk not needed by the calves would raise this to \$374.24. Deduct from this the value of the feed consumed by the calves and there remains \$321.56, or \$32.15 per calf to pay for the expense of milking, feeding the calves and hauling the milk to the creamery. At 12½ cents per hour, this expense need not be one-half of the above sum, leaving \$15 to \$16 clear profit for each calf raised on skim milk.

**RESULTS WITH WHOLE MILK.**—During twenty-two weeks these ten calves consumed 23,287 pounds of fresh milk, 835 pounds of corn chop, 835 pounds of Kafir cornmeal and 835 pounds of alfalfa hay. The total gain was 2878 pounds, or a daily average of 1.95 pounds per head. Charging butter fat at creamery prices, the feed cost of raising these calves amounts to \$157.19, or \$15.72 per head. The feed cost for each 100 pounds of gain amounts to \$5.46.

**RESULTS WITH CALVES NURSED BY THE COWS.**—On May 28, 1900, twenty-two calves that were running with their dams averaged 174 pounds. On October 15 these same calves averaged 422 pounds, or an average daily gain per head of 1.77 pounds. The only expense attached to raising these calves was the keep of the cows, which was estimated by the owner to be \$12 per head. Multiplying the average daily gain of these calves by 154, the number of days in previous experiment, gives a total gain of 272 pounds per head. With \$12 as the cost of raising the calf, each 100 pounds of gain cost \$4.41.

**RESULTS IN FEED LOT AFTER WEANING.**—In the fall all these calves were placed in the feed lot, where they were pushed for baby beef. During the seven months under experiment, the skim-milk calves gained 440 pounds per head, the whole-milk calves

405 pounds per head and the calves nursed by the cows 422 pounds per head.

This experiment shows that the feed cost of raising a good skim-milk calf need not exceed \$5.25 in contrast to \$15.75 for a whole-milk calf and \$8 for one nursed by the dam. The skim-milk calf becomes accustomed to eating both grain and roughness early in life, is handled enough to be gentle and when transferred to the feed lot is ready to make rapid and economical gains.

## THE POULTRY YARD.

### Selling Eggs by Weight.

The Farmers' Bulletin, from which we quoted last week, remarks that since eggs vary more or less in size it has been proposed that they should be sold by weight rather than by the dozen, which is the usual custom in this country. The North Carolina Experiment Station, in investigating this point, recorded the weight of eggs per dozen and the number produced during six months by pullets and old hens of a number of well-known breeds and by ducks. Generally speaking, larger eggs were laid by hens than by pullets of the same breed. The eggs laid by Pekin ducks (old and young) averaged 35.6 ounces per dozen, and were heavier than those laid by any breed of fowls. Of the different breeds of hens tested, the largest eggs weighed 28 ounces per dozen, and were laid by Light Brahmas. The Black Langshan and Barred Plymouth Rock hens' eggs weighed a little over 26 ounces per dozen, while those laid by Single Comb Brown Leghorns, late hatched Plymouth Rock, White Wyandotte and Buff Cochins ranged from 21.7 to 24.7 ounces per dozen.

Of the pullets, the heaviest eggs (weighing 26.5 ounces per dozen) were laid by the Black Minorcas, the lightest by the Single Comb Brown Leghorns and Silver-Laced Wyandottes. These weighed 17.5 and 22.1 ounces per dozen, respectively. The Barred Plymouth Rock, White Plymouth Rock, White Wyandotte, Black Langshan and Buff Cochins pullets' eggs all weighed not far from 24 ounces per dozen. As will be seen, the variation in the weight of the eggs was considerable. In tests carried on at the Maine Experiment Station it was noticed that eggs from hens that laid the greatest number were on an average smaller in size than those from hens producing fewer eggs. The percentage of fertility was also less in the former than in the latter.

In the North Carolina test all of the eggs, regardless of size, had a local market value of 13½ cents per dozen at the time of the investigation. If a dozen Single Comb Brown Leghorn pullets' eggs weighing 17½ ounces were worth 13½ cents per dozen, or 12 cents per pound, the eggs of the other breeds would be actually worth from 16.3 cents for the Single Comb Brown Leghorn hens to 21.6 cents per dozen for the Light Brahma hens, or from 20.7% to 60% in excess of their market value. The eggs of the Pekin ducks would be worth 26.7 cents, or 97.8% above their market value. On the basis of the results obtained, the station advocates selling eggs by the pound instead of by the dozen. It is said that the egg packers and dealers maintain that this method would increase the cost of the eggs, owing to the extra handling necessary and the consequent breakage. An apparent objection to selling eggs by weight is that they are not generally used in the household in this way. Most recipes call for eggs by number and not by weight. There is no question that weighing the eggs would be more accurate, and recipes are occasionally met with in which this method is followed.

## THE VINEYARD.

### The Santa Clara Vine Troubles.

TO THE EDITOR:—Regarding the wholesale dying of grape vines in Santa Clara county, I offer the following for your readers to ponder over: All that part of my old vineyard still in vines was planted right at the beginning partly with resistant stocks and partly replanted with Riparia, Rupestris and Solonis. The age of these vines ranges from six to fifteen years. Quite a number of these vines died last year and many more during this present season; the dying-out has so far progressed that it will not pay to cultivate any more than those which will remain in good condition at the close of this season.

I commenced planting a new vineyard on fresh soil five years ago last spring, partly with Solonis, Champini, America, Elvica and several other vines of Prof. Munson's creation. All these vines were planted by myself and sons, not by Chinamen, and the cuttings had not been stuck in a hole made with a crowbar.

Upon the graft-stock Solonis we grafted Mataro, Carrignan and St. Macaire; they bore satisfactory crops the last two years, but are dying this year by the wholesale, and it seems that all these vines must be replaced with hardier stocks.

Upon Champini we grafted Sauvignon Vert, Zinfandel, Tanat and Mondeuse; all these are healthy, vigorous vines, presenting a great contrast to those grafted upon Solonis. The same satisfaction is given

by the vines grafted upon America, Elvica, Doaniana, and some America and Post Oak hybrids.

Of the direct producers, I have a Post Oak-Herbemont (named Neva Munson) on a very warm southern slope; this vine has always been (for seven years and going on the eighth year) a very vigorous grower, and is this season loaded with grapes.

I could name others very worthy of recommendation, but think this will do for the present.

What may happen to these vines in the future I do not know, but since they have resisted an unparalleled drouth of three years' duration, it is not likely that we growers will witness a similar drouth or one of still longer duration, and consequently I believe grape growers need not despair.

Cupertino, July 21, 1901.

WM. PFEFFER.

## THE IRRIGATOR.

### Save the Forests and Store the Floods.

By GEORGE H. MAXWELL, Executive Chairman of the National Irrigation Association, at the Trans-Mississippi Commercial Congress at Cripple Creek, Colo.

The twentieth century will be an era of mighty achievement, but none greater than the transformation of arid America from an uninhabitable waste into a fertile territory, teeming with a dense and prosperous population.

As Secretary of the Interior Hitchcock has said: "That this vast acreage, capable of sustaining and comfortably supporting, under a proper system of irrigation, a population of at least 50,000,000 people, should remain practically a desert, is not in harmony with the progressive spirit of the age or in keeping with the possibilities of the future."

The time is ripe for the accomplishment of this great national purpose. So long as there was an abundance of unoccupied government land open to homestead settlers which did not require irrigation to be productive, there was no reason why the nation should undertake the great work of the reclamation of the arid region.

But that time has gone by, and now we see thousands upon thousands of homeseekers gathering on the edge of the Kiowa reservation, waiting, not for a home on the land, but for the chance to draw lots for one. Many thousands of these would-be homebuilders will be turned back with bitter disappointment in their hearts. A few fortunate ones will possess the promised land.

And Uncle Sam has 100,000,000 acres left of his great farm which he can subdivide among his children, and give to every industrious man who wants a home on the land a chance to get it, for a generation yet to come, if Congress will heed the demands of the people and inaugurate a sound and sensible policy for the reclamation and settlement of the arid public domain.

The obstacles in the way are being rapidly overcome. The East, as the result of the persistent educational campaign which has been carried on by the National Irrigation Association for the last two years, is becoming thoroughly awakened to the gigantic possibilities of the increase of our national wealth and prosperity, the enlargement of the home market for our manufacturers, the opening up of opportunities for employment for our workers, and for home seekers to get land, through the building by the national Government of the great storage reservoirs and main-line canals which are necessary to bring the water within reach of settlers.

The people of the West, and the people of the whole country, have repudiated State cession, and will refuse to be led into the shoals and quicksands of any scheme which would turn the control of the solution of this great problem over to State politicians or State legislatures, or put any impediments in the way of the settler who desires to go upon the public land and build his home there.

Where can there be found a subject more fitted to arouse the enthusiasm and pride of every American citizen than the transformation of this vast desert region into happy and prosperous homes for many millions more of patriotic American citizens.

And if we are to accomplish this great result, we must take as the slogan of the movement "Save the forests and store the floods." The preservation of the forests is of first importance. We must remember always the old Arab saying that "The tree is the mother of the fountain." With the experience of the past before us, we know that the destruction of the forests means the destruction of the water supplies, and not only present desolation, but hopeless aridity.

The forests are nature's storage reservoirs. Without them artificial storage reservoirs will be useless. But if we will not only preserve the forests but also store the flood waters, that now go to waste, in great reservoirs where they can be utilized for irrigation, and for power for all industrial purposes, we can create in the western half of the United States an addition to our national wealth and resources which will double it. It is idle to talk of this great work being accomplished by private capital or private enterprise. It is a national problem just as much as were the dikes of Holland, or the great Nile dam, or the irrigation works of India. It is the creation of a country where there was none before.



## Agricultural Review.

### ALAMEDA.

**FRUIT SHIPMENTS SLOW.**—Oakland Enquirer, July 19: Despite the slow delivery of fruit, the California Central Canning Company at Emeryville is running with nearly 300 hands—men, women and Chinamen. The operation of the cannery has been hindered this season by the difficulty in getting a sufficient supply of fruit. Now, however, a sufficient quantity has been secured and assurances obtained that enough will be delivered every day to keep the present force busy. When working full handed the cannery employs almost 450 persons. So far the pack has been chiefly of apricots, with some peaches and plums. The fruit pits, which were formerly wasted, are now sold by the cannery and a considerable sum realized from this source. The apricot pits are sent to the various acid works, where they are used in the manufacture of a low-grade product. A San Jose company takes all the peach pits and their distillate is converted into a brandy that may be found in San Francisco water front saloons.

### BUTTE.

**ENORMOUS BARLEY YIELD.**—Chico Record: W. V. Helphenstein has finished harvesting a ten-acre field of barley on the E. T. Reynolds ranch, which is under lease to Mr. Compton. The land had never been cropped before, and yielded the enormous amount of forty sacks to the acre.

### FRESNO.

**FRESNO'S MELON TRUST.**—Fresno Democrat: The Melon Growers' Association is a reality. Last Friday they held a meeting and effected a permanent organization. K. Arkalian was elected chairman and Milo Rowell secretary, they to serve also on the board of directors and the selling committee with J. Vartanian, S. Broaddis and Mr. Markley. It is believed that they control nearly 90% of the crop. Mr. Rowell says that the melons are selling readily and bringing good prices, and the same is true of cantaloupes. During the early part of the season many of the melons were of inferior quality, owing, it is thought, to the long dry spell in March and the cold weather, but now some choice articles are coming in. The growers seem to consider that their prospect is bright this season.

### HUMBOLDT.

**DEER SAID TO BE A NUISANCE.**—Humboldt Times: A correspondent writes from Bull creek as follows: "I have been asked to write a letter to the Times asking the Game Warden to come here and look after his deer, as they are getting to be a nuisance, and the law says: 'Mustn't shoot 'em.' They are gathering the winter apples rather early and destroying young trees, taking corn, cabbage, etc. What must a man do? If you try to catch them to shut them up and advertise, as one would any other stock, why, they would run too fast. Mustn't let the dogs chase 'em; that's against the law. You'd have Uncle Sam in your wool—or those sports who sit around the cities, making these game laws, so they can go out shooting when they see fit—and the poor ranchers, who have to feed and winter the deer on their gardens, young orchards, etc., must not hurt them. One man saw thirty-six deer in one day last week, and he has an orchard that the deer are using for a baseball park and playing ball with the apples. Another man here has a cabbage patch that the whole band of deer use as a large salad bowl, and very daintily pick off the leaves and leave the bare stocks to greet the eye of the gardener next morning."

### LOS ANGELES.

**APRICOT AND PEACH CROP.**—Pasadena Star: The price paid for apricots this year by the Pasadena Packing Co. varies from \$20 to \$35 per ton. The crop is quite light and the quality of the fruit is not up to the usual high standard, although some very fine specimens are brought in. Apricots are about half a crop. There is a heavy crop of free-stone peaches, but a light crop of clings. The price of labor is the same as last year. Nearly all of the women, boys and girls work by the piece, and the men are paid from \$1.50 to \$3 per day, according to their worth and duties. There have been more applicants for employment this season than ever before.

### MADERA.

**FLAX GROWING A SUCCESS.**—Madera Mercury: The 110 acres of flax planted this year near Turlock has been harvested and is now ready for the fiber machine. The planting of flax was an experiment, but, from the success attending the effort, it is possible that a much larger acreage will be put in next year.

**A GRAIN FIRE.**—Modesto News: Friday last there was a grain fire near Berenda

which destroyed grain belonging to J. S. Wootten of this city and James Curran, a former resident of this city. The fire started along the line of Curran's combined harvester, and it is believed that the machine must have struck a rock and the spark started the fire. Curran lost about 1300 acres of wheat that was yielding from six to eight sacks to the acre. J. S. Wootten's loss was 350 sacks of grain that had been harvested, but there was no insurance upon the Wootten grain.

### MONTEREY.

**CHEVALIER BARLEY BURNED.**—Salinas, July 17: Fifty acres of standing and fifteen acres of cut and bundled chevalier barley, averaging forty sacks to the acre, or a total of about 2500 sacks, were destroyed by fire near Spreckels' sugar factory. The fire is said to have been caused by Chinamen throwing burning matches into a field of grain, after having used the matches for lighting cigarettes. A change of the wind alone saved an immense stack and several buildings from destruction. The loss, which will amount to \$3000, was fully covered by insurance.

### RIVERSIDE.

**LEMONS IN ACTIVE DEMAND.**—Riverside Enterprise: There has been but little stirring in oranges the past week, but the terrific hot weather has made a demand for lemons and they have taken another jump during the past week and are selling at least 50 cents per box higher, with prospects good for a continued high market. The shipments from California have been very large, but there is a ready demand for all that goes out. All of the lemons that have been accumulating for months in the storehouses are being loaded and sent out as fast as possible. A large part of the shipments, however, consists of fresh cut lemons, and the better condition in which these are arriving is helping the market.

### SAN BENITO.

**FRUIT AND GRAIN.**—Hollister Bee: In San Benito county there are sixteen acres in table grapes and 174 acres in wine grapes; 9500 trees bear apples, and apricots reach the numbers of 15,000 bearing and 3000 non-bearing. The number of cherries in bearing are 2500, and 500 are not bearing. There are 200 fig trees, 300 olive trees, and 14,000 bearing and 4000 non-bearing peach trees. The number of pear trees in bearing are 11,750 and non-bearing 3600. Prune trees are nearing the six-figure mark—74,810 bearing and 5000 non-bearing of the French variety, while the total of all other kind of plums or prunes is only 6300. Only 250 nectarine trees, 100 orange trees and 7000 almond trees are listed. Walnuts are coming in favor, as there are 1500 non-bearing to 400 bearing trees. The acreage seeded to wheat is 14,701; to barley 19,800; 7500 acres are devoted to hay and 1600 to sugar beets.

### SAN JOAQUIN.

**WATERMELONS A SMALL CROP.**—Lodi Sentinel, July 18: Watermelons will be quite late this season. There is no great acreage planted, but this is probably due to the fact that the spring rains were so late. As it is, growers are a little bit sore, though the young melons are coming on very well since the cool weather set in. During the late extremely hot spell many of the young melons literally cooked on the vines, thus killing off much of the first crop. A peculiar disease is said to have made itself manifest in some of the fields, though no great amount of damage is reported. It begins at the roots of the vines and quickly kills. It will be some time yet before the watermelon from this district makes its appearance in the market.

### SAN LUIS OBISPO.

**NEW BEAN THRESHER.**—Paso Robles Record: Mr. J. Skinner has just completed the building of another of his patent bean threshers. The machine is slightly improved over the others that have been made. It works with three rattan brushers about 8 feet long and 10 inches wide that operate over a cast iron corrugated floor with openings for the beans to drop through. The brushers work independent of each other, but are placed close together and side by side. The unthreshed beans enter at one end of the table and are dragged in and under the brushers which brush only one way. The beans fall through slots with the chaff or are carried over the end opposite the entrance. From where they fall they are carried to a fanning mill cleaner and are soon ready for the sacks. The machine will be inexpensive when compared with the cost of an ordinary threshing machine. The cost of the Skinner machine will probably be about \$200. It can be run with 2 or 3 H. P. engine.

**RUST IN SOME FIELDS.**—Advance: It transpires that there is considerable rust in some fields of grain in this vicinity, so that the yield was not as heavy as was

anticipated. A notable instance is the Hardenberg grain near Paso Robles. We learn that it turned out but three sacks to the acre. There are many trees on the land, however, and this is an exceptional case. The average will doubtless be greater than the normal yield of recent years.

### SANTA CLARA.

**FRUIT DRIER BURNED.**—San Jose Herald, July 17: A fire, the origin of which is supposed to be incendiary, destroyed the old Crandall fruit drier at Los Gatos at about 1 o'clock this morning, with all the contents of the structure, consisting of 430 tons of dried fruit. The loss is placed at \$20,000, with insurance at \$12,000.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, July 18: Offers from 85 cents upward for 100 pounds are being offered orchardists for their Bellefleur crop. The hot days two weeks ago did some damage to apples in a few of the foothill orchards, but it was not severe. The season has been very favorable thus far for the perfect development of Newtown Pippin and other late varieties of apples which are grown for distant markets. The trees and the fruit have never looked better, and the fruit gives every indication that it will mature right.

### SONOMA.

**ACREAGE IN FRUITS AND CEREALS.**—Santa Rosa Press-Democrat: From County Assessor Dowd's annual report it is learned that the number of acres sown for crops in Sonoma county for the year 1901 is as follows: Wheat 4570, oats 7290, barley 2010, corn 1410, hay 47,950, sugar beets 610. There are 270 acres of bearing table grape vines and 90 acres non-bearing, assessed, and 110 acres non-assessable this year. There are 12,080 acres of bearing wine grape vines and 2270 acres of non-bearing vines, and 2880 acres not assessable this year. There are of fruit trees growing 170,160 bearing apple trees and 71,320 non-bearing; apricots, 14,700 bearing, 2660 non-bearing; cherries, 29,960 bearing, 13,240 non-bearing; figs, 1910 bearing, 1010 non-bearing; olives, 28,960 bearing, 14,960 non-bearing; peaches, 19,755 bearing, 13,860 non-bearing; pears, 45,960 bearing, 10,320 non-bearing; French prunes, 360,970 bearing, 155,270 non-bearing; plums, other kinds, 38,240 bearing, 6870 non-bearing; lemons, 510 bearing, 430 non-bearing; oranges, 4590 bearing, 1040 non-bearing; almonds, 2660 bearing, 390 non-bearing; walnuts, 2830 bearing, 2070 non-bearing.

**PRIZE WINNING SHEEP.**—Santa Rosa Republican: Sampson W. Wright has recently imported something entirely new in this county, also a novelty in the State, Dorset horned sheep. Two pedigreed rams that came in over the Southern Pacific recently attracted considerable notice at the depot. They are magnificent animals, with large curved horns and heavy coats of wool. A dozen ewes are to quickly follow to complete Mr. Wright's flock. One of the rams is Woodland, 34, another was formerly the property of Joseph E. Wing of Mechanicsburg, Ohio. As a lamb it was exhibited by Mr. Wing and won all the prizes for which it competed. After exhibiting it Mr. Wing sold the animal into Indiana. It brought the highest purchase price for the year. It was from Indiana that Mr. Wright obtained it. Four of the ewes which are to be received by Mr. Wright come from Tranquility farms, New Jersey. They were the principal winners of premiums at the International Stock Shows held at Chicago in 1900. The Dorsets are said to be the best mutton sheep and they are also esteemed for their wool. They are also among the bravest sheep and are considered dog proof, protecting themselves with their horns, both the ewes and lambs being provided with horns.

### STANISLAUS.

**A \$50,000 LAND DEAL.**—Modesto Herald: One of the finest stock ranches in the valley, comprising 6000 acres, largely bottom land of the San Joaquin river, in this county, changed hands on Saturday, Miller McPherson disposing of the property to A. G. Chatom of Turlock. The consideration will approximate \$43,000 or \$44,000, something in excess of \$7 per acre on an average. Chatom also takes McPherson's bunch of cattle, comprising perhaps 230 head, calves included, at a uniform price of \$25 per head, the transaction as a whole representing the transfer of approximately \$50,000. The land comprises what is known as the Vivian estate stock ranch, the W. K. Wallis ranch and a part of the J. H. Carpenter ranch. A portion of it is in Turlock Irrigation district, but the most of that portion is only nominally assessed, because it is overflow land or can not be irrigated because of its broken character. Mr. Chatom has a herd of 1400 beef cattle, at present on rented land

of the Mitchell estate, to stock the new possession.

### TEHAMA.

**A DELIVERY OF 5000 MUTTON SHEEP.**—Red Bluff News, July 19: Major E. H. Ward and James Catton, the mutton buyer, started this morning for Government lake, in the eastern part of the county, where the former will deliver to the latter about 5000 head of mutton sheep that were contracted for last May from the firm of Cone & Ward. The sheep will be driven to this place and shipped from here to San Francisco.

### TULARE.

**OVERFLOWED WHEAT.**—Hanford Journal, July 19: About 1200 acres of grain belonging to Bardin Bros. of Salinas and Dr. J. M. Bond and his sons of Hanford, have recently been put under water by the wind blowing the water of Tulare lake out through a break or a cut in the levee of the Buena Vista Reclamation district. The Bardins still have a large amount of grain that the water has not reached. The land referred to is in the extreme western and southern part of the reclamation district. As to how much damage, if any, the water will do, seems to be problematical. The lake is said not to be raising now, and the streams that flow into it have all gone down, and if no more water gets on the land, as seems very probable, little damage may be done, perhaps, and yet again the whole crop that is overflowed may be spoiled.

**ROTATION AND IRRIGATION.**—Tulare Register: A prosperous farmer suggests that those who can irrigate their stubble now will do well to sow Jerusalem corn broadcast over the ground as soon as they can get on to it to plow after irrigating; that it will make splendid forage for stock until after frost, when the cattle will eat up all the stalks. It will be almost equal to summer-fallowing the land. The best wheat this farmer ever raised in Tulare he grew after having taken off a crop of Jerusalem corn grown in this way, on irrigated stubble plowed and sown broadcast.

### VENTURA.

**ESTIMATE ON BEAN CROP.**—Oxnard Courier: Early in the season the Courier made an estimate of this year's Lima bean crop in Ventura county, placing the acreage at about 35,000 acres and the possible output at 50,000 bags; we still hold to these figures, and every indication points to their being fulfilled. The warm, sunny weather, interspersed with foggy nights, is bringing the vines along very rapidly. Bloom will soon be filling them. As on last year, thousands of acres on the south side of the river will be irrigated down the rows, and, to a lesser extent, near Santa Paula. The Donlon Bros. and others have already begun their summer irrigation, and will continue for some time. On the Santa Clara ranch almost every bean raiser along the great Santa Clara ditch will use water. Every indication now points to the price of beans being exceptionally good this fall. Buyers are offering to contract for \$3.50 per cental, and very few farmers have yet taken the offer.

**A PAIR OF VALUABLE PALMS.**—Ventura Democrat, July 19: A palm of the *Cocus plumosa* and one of the *Seaforthia elegans* species, each about fifteen years old, and now in Mrs. Shepherd's gardens, have attracted the attention of a wealthy Los Angeles man, who is starting a private park. An offer of \$200 for the two palms was refused by Mrs. Shepherd, as the plants are specimen palms and have no market value. A San Francisco florist advised Mrs. Shepherd that the palms were worth on the market over \$200 each.

### YOLO.

**FRUIT SHIPMENTS.**—Winters Express, July 19: As an indication of the fruit shipments, one company has disbursed this week over \$15,000. The total number of cars that have gone East to date is 170, against 137 for the same date last year. This does not take into consideration the shipments to San Francisco and Los Angeles and other local points. The local shipments amounted to considerable, as sometimes two cars were going each day, and the average for the season exceeded one car a day. Grapes and late peaches will soon begin to go East. Grapes are a fair crop and peaches large. Dried fruit prices are also good, and promise to be better. The fruit is of unusually fine quality and it will command the top price all through the season.

**A TAILLESS CALF.**—Yolo Mail: A very curious freak of nature is on exhibition at Linggi ranch, Elk Horn. A calf was born there recently without a tail, and there is a curious hump on his back near the hind quarters not unlike a camel's. The hind quarters are about 4 inches higher than they ought to be. The calf is a very curious specimen, and has attracted the attention of the neighbors for miles around.



## THE HOME CIRCLE.

### A Dream of Luxury.

If I had a million dollars I would surely take my ease.  
I would go where'er I listed and I'd wear what'er I please.  
I wouldn't wear stiff-bosomed shirts nor collars strong and high,  
Intended greatly to impress the casual passer-by;  
I wouldn't wear my well-made coat nor patent leather shoes—  
I'd change the style of hat that I habitually use;  
These stern decrees of custom which so hold me in their power—  
If I had a million dollars I'd discard them in an hour.

I'd get myself a pair of shoes a long ways off from small,  
And if I found some cool plowed ground, why, I'd wear none at all.  
I'd wear a great big hat of straw, with overhanging brim,  
And look just like the hired man, while swapping yarns with him.  
I'd only have one gallus, and I'd wear a gingham shirt,  
And I'd keep away from town, so's no one's feelings would be hurt.  
And I'd make long trips to Nowhere, underneath the rustling trees—  
If I had a million dollars I would surely take my ease.

—Washington Star.

### A Stray Man.

Miranda Rose was a sweet-looking woman without really knowing it. Born and reared in an inland, manufacturing town, "Mirandy," as they called her, had never found time to waste any too much thought on her personal appearance. She was upwards of thirty, without relatives, and dependent on her own exertions as a seamstress for support.

From her father, Mirandy had inherited the wit, good-humor and self-reliance that made her a pleasant, agreeable woman to go into different homes, while from her mother she had to a degree inherited the strict, prim ideas concerning propriety and womanly reserve, especially toward "men-kind," that characterizes one type of the New England woman.

"Never on any account, my daughter, have anything to say to a stray man," her mother had cautioned time and again. "They are dangerous creatures. Many of them haven't any conscience at all, and no knowing when it is safe in the least to trust one."

What is bred in the bone will linger there whether it "outs in the flesh" or not. And Mirandy, lone woman that she was, had unconsciously a deep-seated dread and distrust of the genus man except as regarded such as she knew well and felt that she could trust with safety.

In her innermost soul, Mirandy had certain vague longings that are as inseparable from the nature of an affectionate, willing, cheery woman, as the bloom is from the rose. She never had thought it all out, but when in going from house to house, she saw happy children caressing their mothers, and men turning gladly toward the hearthstone at night, Mirandy would heave a kind of smiling sigh, and half wonder why she must forever go to her two little rented rooms at nightfall and amuse herself all by herself as it was her portion to do.

And deep down in her spinster heart was one desire that for summer after summer had been a kind of dream, a want, an increasing longing, that now she had more than half determined to gratify.

"I could," she mused, "and without disturbing my little board in the bank. I've been so industrious all through the winter and spring that I really could take the money without pinching, and I declare, I believe I'm entitled to it. I guess I might's well run over and see what Cynthia Wells says about my going."

Mirandy had never looked upon the sea. By this we do not mean the rivers that flow everywhere, nor the rippling ponds that flow often through quiet towns. Plenty of these Mirandy had

seen, aye, and feasted her eyes upon, for "the water" was something she could never see enough of. But the ocean, the great, grand, limitless expanse and waste of water that books told of and that people talked about, it seemed as though Mirandy actually panted to look upon with her own eyes.

It was hot and dusty in the inland town, poor Mirandy was tired out, the great sea called more loudly than ever, and now, oh, joy! old Mrs. Parley who had a plain little cottage at Scrum island, quite a resort of late, had written, fixing a price for board for three weeks that had sent such a thrill of excitement and delight into Mirandy's maidenly bosom as she had scarcely ever known before.

Cynthia Wells, a maiden lady of forty summers, lived in her own trim little house directly opposite Mirandy's lodgings. She liked Mirandy better than she would acknowledge, but in her heart of hearts she was jealous of her. Mirandy was good-looking and was cheerful and was liked. Cynthia was faded, inclined to murmur, and not over popular. Dame Rumor had it that she had "been disappointed more than once," but this other lone woman, far better off than poor Mirandy, held her head well up, declared herself better off than as if she wasn't her own mistress, and gave the impression strongly that she guessed she "knew a thing or two" when it came to such a matter as giving up one's independence.

She listened a bit grimly as Mirandy laughingly unfolded her plan, exclaiming as she closed, "Now congratulate me, Cynthia, do! You know I always like to think people approve of what I do."

"Well, Mirandy Rose, I'd congratulate you fast enough, if I conscientiously could!" was the unpromising reply. "But for a woman to go all by herself to a seaside place, and of all things! to an island running out into the ocean where they have one of those dreadful life saving stations—well, I'm glad it isn't me, that's all!"

"Why, I think a life saving station is one of the best things going," said Mirandy, although her voice sank and trembled a little. "But the station is half a mile from Mrs. Parley's. I needn't know the least thing about it, and as to going alone, you know I have to go alone if I go at all, Cynthia?"

She put the last half-pathetic appeal in the form of a question. Alas! that very station had been a bugbear already to her simple imagination. Every word that Cynthia spoke now hinted of stronger menace.

"Oh well, do exactly as you think best, Mirandy. You certainly are old enough to judge for yourself"—with a little sarcastic laugh—"but I know just how it is at these resorts, especially where a pack of men are stationed on one pretense and another. You can't go for a stroll, or walk the beach, or go anywhere at such a place, but lo and behold! a stray man turns up at every few yards. I wouldn't trust myself at Scrum island or any other kind of lonesome bit of land bordering on the ocean, unless some good, reliable friend was with me. Even then, I should keep a sharp lookout and shy clear of such new strangers as tried to scrape an acquaintance. There's plenty of 'em."

Mirandy felt terribly put down, and didn't stay long. When she went across to her lodging, Cynthia looked after her with the muttered observation: "Well, I guess I've taken the idea out of her head of going off sixty miles to an ocean island all by herself. I hope I have."

Mirandy was depressed, and no mistake. At first she dwelt on the shady side of the question. Oh, dear! had not Cynthia spoken ominously of the very thing or object her mother had always cautioned her against? A stray man! And was not the "coast-guard," that Mrs. Parley had spoken of rather jubilantly, a very junket, so to speak, of this objectionable species?

The next moment she smiled. "There's not the slightest doubt that Cynthia'd like to go with me," she

said in soliloquy, "but—I don't want her. One old maid is enough to go off boarding for rest and leisure and then—" up came that fine characteristic of her father's—"am not I sufficient unto myself? Verily I am, and stray man, or no stray man, I'm going to Scrum island, and right away, too!"

Miss Cynthia Wells bade Mirandy a significant, more than half displeased good-bye, when two days later an expressman came for the little black trunk, and Mirandy started, alone of course, for Scrum island. She had almost asked at last to accompany Mirandy, but the latter lady had managed remark innocently that Mrs. Parley had but one room to let.

Oh, but the glory of the sea! It seemed as though Mirandy Rose was fairly intoxicated by the splendid vision. She would sit for hours dreaming across the broad expanse, her soul fairly reveling in the changeable picture. She would forget everything—her wearying needle, the sameness of her maiden life, getting in late at meals, and forget that God's creation held such a thing as a stray man, in the beautiful absorbing dash and brightness of the foaming waves and rushing billow. She was "in it" at last to her heart's delight and content; "in" for the long desired, restful sight.

As for the coast guards, they came and went in their clean white clothing, apparently oblivious of meeting a stray woman on her way to and from the rocks close by the sea. Once or twice when they happened to look at her face, they looked again, to Mirandy's surprise, exactly as if they wanted to see the pleasant countenance again.

One day—it was a gray, gloomy day, such as often lends a peculiar charm to the old ocean. Mirandy had taken a book Mrs. Parley had recommended, and had skipped blithely as a girl across some low rocks until a slight distance from the shore, where she seated herself on some favorite rocks higher up and commanding a sweeping view along the water way. For a long time the book lay idle in her lap, and with hands clasped around her knees, she watched a number of fishing vessels slowly making their journey to deeper waters. Then the dusky beauty of the sky and wave claimed her attention. Finally, to rest her eyes, she took up the book to beguile her a little while until the tide rolled in.

The story proved alluring beyond her expectations. At intervals she paused to laugh happily at tiny wavelets that rushed in an important way between the rocks below her, then she read on. All at once she started in surprise. A bold wave, not so tiny, came with impetuous force up the declivity where she was perched, sending foam and spray all over the page she was reading.

Why! how had the sea "contrived" to roll in at such a rate while she had ceased to watch for a little time? At first she was amused, and sat smiling in pleased unconcern as another ambitious wave swelled and roared, and rushed to her very feet. Then she stood up. "Perhaps I'd better be getting down to the sands," she said.

But, upon looking behind her, she gave a little cry of consternation. She remembered, too, on the instant, that Mrs. Parley had warned her that the tide had a sly way, on rough days, of creeping swiftly around the back of the high rocks and hemming them in.

"I shall get proper wet," she said, cheerfully, "but I must plunge right along. Oh, dear, dear me!"

Even as she spoke, a monster wave dashed defiantly over the rocks midway between herself and the shore, and before that had subsided there came another, then another; there seemed no pause between.

"Land sake alive! You don't mean to drown me, do you, when I've loved you so desperately?" she half exclaimed, as safe retreat appeared already cut off, and she looked reproachfully at the tumbling foam.

It was no use diving here and there,

trying, with trembling haste, to jump from one rock to another; the great, greedy sea fairly drove her back. At last she stopped in despair. She looked at the sea, which had risen about her too high to be safely breasted. Then she looked landward. No one in sight. She thought of her busy life. It was far more precious than she had realized, although she never depreciated it. She thought swiftly of her father and her mother, and all at once, flinging out her arms, she cried aloud: "Oh, for a stray man!"

But the waters rose and rose.

"I expect Cynthia'll thank her lucky stars forever and ever that she didn't get a chance to come with me," she half sobbed, then turning toward a bend along the shore, she suddenly eyed eagerly an object at a distance. Another instant she again flung out her arms as she cried joyfully:

"A stray man, as I am a living woman! Thank God!"

She took the cape from her shoulders and waved it to and fro with all her might. The white figure approached quickly, and soon a hearty voice called out:

"Hold on, my dear, don't be afraid. I'll come for you presently, stay right where you are till I come."

All by herself Mirandy blushed. "He called me 'my dear'," she said, under her breath. My! where is he?"

Mirandy thought she had seen a man run before, but she concluded she hadn't really, as the round white cap and the flying white figure fairly spun out of sight. A moment or two more and out, just before the Life Saving Station, shot a long white boat, which danced recklessly, as she fought through the foam and bade defiance to the rush of the still incoming tide. Three men were rowing.

"I'll warrant Cynthia'd give about all she's worth to be here now," bubbled Mirandy, never thinking there might be considerable danger.

But when a stalwart man in an oil-skin suit clambered to his neck in water to the rocks below, and called aloud, "I'll throw you a rope, my dear, put it around you waist and come as far as you can, then trust to me to save you," poor Mirandy turned pale.

"I shall be dashed to pieces on the rocks," she cried.

"Oh, no you won't," responded the voice, "you're only to trust yourself to me and you're safe."

She put the rope with its adjusted loop about her waist. She then descended a few steps, trembling, then suddenly floated off and almost immediately, by some dexterous clutch, she was caught, held upright, and before there was time to realize anything she was in the long white boat.

"I'm wet through," she faltered, scarcely knowing what she was saying.

"Never mind, my dear," said the hearty sailor, "I've got you all right, and you're perfectly safe."

And so it proved. At the station she was given a comfortable room in which to don a sailor's jacket while her dress was drying. This, by some process, was soon accomplished, then Mirandy found herself well enough to inspect the interesting and remarkably speckless place.

"I shall come for you again, my dear," said the man who had rescued her, as he left Mirandy at Mrs. Parley's, later on.

And he did come for her, in good earnest. He was to leave the service in the fall to enter a shipchandler's establishment in a near city. And he secured Mirandy's promise to keep house for him in the most honorable and desirable position possible, for somehow he had liked the comely face and bright cheery manner of the seamstress from the moment he caught her from the rocks in his strong arms.

"Dear me, Mirandy," said Cynthia Wells, the day after Mirandy's return to her rooms, "who in the world is that great man that came home with you, but left so soon with so many good-byes?"

"Oh, that?" replied Mirandy, her eyes dancing brightly, "now who do think that is, Cynthia?"

"Not some stray man you've picked



up, I hope," said Cynthia, severely.

"No, it's a stray man that picked me up," said Mirandy, "and mighty glad I was to have him, too. He saved my life, and this fall we are to be married. Poor mother was mistaken, there is such a thing as knowing when a man can be trusted."

"Humph! muttered Cynthia, as she turned from Mirandy's door, "I was a great goose not to insist on going to Scrum island myself, this summer."

After a moment of dissatisfied musing, she added "any stray may not be the worst thing in the world after all." —Mrs. Harriet A. Cheever.

### Camera Notes.

Glycerine is the standard agent to prevent prints from curling. Add a little to both toning and fixing baths, or immerse the finished prints in a solution composed of water one part, glycerine three parts, alcohol four parts.

The magnesium strips which are often referred to in photographic magazines are strips of thin fabric impregnated with magnesia powder. They offer a convenient method of making quick night exposures.

The Smithsonian Institution at Washington will shortly possess the most rapid camera in the world. It is designed to take a successful negative in one six-hundredth of a second, and it is hoped that this may be increased so that a negative may be obtained in one-thousandth part of a second.

Gelatine plates will keep indefinitely if not exposed to dampness. Even extreme heat will not affect them. If to be kept for any length of time, however, they should be wrapped in light, tight paper. A year should not cause the slightest deterioration in a good plate. Films are nowhere near so long-lived. Each roll is dated usually not more than six months ahead, and after that date the manufacturer does not guarantee it.

Uneliminated hypo in prints will do a great many disagreeable things, the most important of which is to entirely spoil the picture. There is one very good way of testing whether your final washing of the prints has been long enough, and that is adding to the wash water a small quantity of alcoholic solution of iodine. If there is hypo still in the prints, the back of each one will turn light blue. Continue washing until the blue disappears. If no color appears, the washing has been sufficient.

Foggy negatives: White light entering camera or dark room; too much light during development; introduction of hypo into developing solution; too warm developer, or excess of alkali.

Too strong with clear shadows: Under exposure.

Weak negatives with plenty of detail in the shadows: Over-exposure, or too weak developer.

Too much intensity: Developer too strong, or too warm.

Fine transparent lines: Using too stiff a brush in dusting off plate.

Round, transparent spots: Air bubbles in the developer.

Transparent spots of irregular shape: Dust. Keep the inside of camera and plate-holder free from dust by occasionally using a damp cloth to dust with, and brush plates before exposure with a soft camel's hair brush.

Mottled appearance of negative and fading of image: Insufficient washing.

PAPA (severely)—Did you ask mamma if you could have that apple? Five-Year-Old—Yes, papa. Papa—Be careful now. I'll ask mamma, and if she says you didn't ask her I'll whip you for telling a story. Did you ask mamma? Five-Year-Old—Papa, I asked her. (A pause.) She said I couldn't have it.—Tit-Bits.

RESCUER—Miss Properleigh, give me your hand. Drowning Maiden (preparing to sink for the third time)—Oh, Mr. Manley, this is so sudden; so unexpected! You will have to ask mamma!—Harlem Life.

### The Evil of Eating Alone.

At a time like the present, when the marrying age of the average man of the middle classes is being more and more postponed, the physical ills of bachelorhood come increasingly under the notice of the medical man. It is not good for man or woman to live alone. Indeed, it has been well said that for solitude to be successful a man must be either angel or devil. This refers, perhaps, mainly to the moral aspects of isolation, and with these we have now no concern.

There are certain physical ills, however, which are not the least among the disadvantages of loneliness. Of these there is many a clerk in London, many a young barrister, rising, perhaps, but not yet far enough risen, many a business man or journalist who will say that one of the most trying features of his unmarried life is to have to eat alone. And a premature dyspepsia is the only thing that ever takes him to his medical man. There are some few happily disposed individuals who can dine alone and not eat too fast nor too much nor too little. With the majority it is different. The average man puts his novel or his paper before him and thinks that he will lengthen out the meal with due deliberation by reading a little with, and more between, the courses. He will just employ his mind enough to help, and too little to interfere with, digestion. In fact, he will provide that gentle mental accompaniment which with happier people conversation gives to a meal.

This is your solitary's excellent idea. In reality he becomes engrossed in what he is reading till suddenly finding his chop cold he demolishes it in a few mouthfuls; or else he finds that he is hungry, and paying no attention to the book, which he flings aside, he rushes through his food as fast as possible, to plunge into his armchair and literature afterward. In either case the lonely man must digest at a disadvantage. For due and easy nutrition food should be slowly taken, and the mind should not be intensely exercised during the process. Every one knows that violent bodily exercise is bad just after a meal, and mental exertion is equally so.

Wise people do not even argue during or just after dinner, and observation of after-dinner speeches will convince any one that most speakers neither endure themselves nor excite in their hearers any severe intellectual effort.

In fact, the experience of countless generations, from the red Indian of the woods to the white-shirted diners of a modern party, has perpetuated the lesson that a man should not eat alone, nor think much at this time, but should talk and be talked to while he feeds. Most people do not think much when they talk, and talking is a natural accompaniment of eating and drinking.

How does it fare with the many solitary women of to-day? No better, we know, than with the men, but differently. Alone or not a man may generally be trusted at any rate to take food enough. (We suppose, of course, that he can get it). With a woman it is different. She is more emotional, more imaginative, and less inclined to realize the gross necessities of existence. Therefore, the woman doomed to dine alone as often as not does not dine at all. She gets dyspepsia because her digestion has not sufficient practice; a man gets it because his functions practice it too often in the wrong way.

Worst of all, perhaps, is the case of the solitary cook. In the myriads of small flats in London there are thousands of women "doing" for their solitary masters or mistresses. These women, whose main occupation is to prepare food for others, find it impossible to enjoy or even to take food themselves. As confectioners are said to give their apprentices a free run of the stock of the shop for the first few days, knowing that it will effectually cure appetite afterward, so the women who are always occupied with buying and preparing food grow unable to use it for themselves. These people suffer from dyspepsia, which is cured if somebody else manages their kitchen for a week, allowing them to take meals without preparing them.

It needs no moralist to declare the

evils of solitariness. Man and woman is a gregarious animal. Physically and intellectually we improve with companionship. Certainly it is not good to eat and to drink alone. It is a sad fact of our big cities that they hold hundreds of men and women who in the day are too busy and at night too lonely to feed with profit, much less with any pleasure.—Lancet.

### Poor Bridegroom!

Chloe, a young colored house servant in an Atlanta family, had asked permission to attend the wedding of one of her friends. This permission having been granted, Chloe set forth, arrayed like unto a combination of Solomon and glory and the lilies of the field. The next day her mistress said to her:

"Well, Chloe, how did the wedding go off?"

"Oh, la, missus, it was de grandest weddin' I ever saw! It was just lubly! An' de splendid weddin' suppah an' de bride—oh, de bride! She had on de longest trail an' a white veil all ovah her, an' a wreath ob flowahs, an', oh, it was jess de mos' elegant weddin'!"

"How did the bridegroom look?"

An expression of infinite disgust came into the face of Chloe as she said, scornfully:

"La, missy, dat good-for-nothin', no-count niggah nebbah come a-nigh!"

A JUDGMENT as of Solomon is reported from a neighboring State, wherein is involved the ownership of a pig. Each party claimed the pig, and Solomon first suggested that it should be cooked and divided between them. Neither party, however, possibly because roast pork tempts not in hot weather—would consent to the barbecue. "Then," said Justice, seeing that the claimants were of the opposite sex, "the only way to settle the matter is to get married and keep the pig in the family." So they got married and kept the pig in the family, and it is to be hoped that they all will live happily forever after.—American Cultivator.

"You people down here spent \$5000 boring a hole in the ground for oil, didn't you?" asked the passenger who was walking up and down the station platform to stretch his legs while the engine was taking in a feed of coal and water. "Yes, sir," returned the hump-shouldered native sitting on a nail keg, "that's about the size of it." "And what have you got to show for it?" "Well, mister," said the native, taking a fresh chew of Missouri plug, "we've still got the hole."—Chicago Tribune.

### DOMESTIC ECONOMY.

#### Hints to Housekeepers.

A glass of hot milk taken just before retiring will often induce sleep for those troubled with insomnia.

If the bottom crust of a pie is brushed over with the white of an egg before putting in the filling it will not absorb the juices and become soggy.

The secret of making good mashed potatoes is to keep them hot while mashing, and to have also the milk very hot when it is added. Beat thoroughly, and serve in a hot dish. Lay a piece of butter on the top and serve.

To wash organdie, soak it in a gallon of warm water in which a tablespoonful of borax has been dissolved. Let soak about twenty minutes and pour in soap-suds made of pure castile soap; squeeze several times, pour boiling water over it and allow to cool; rinse thoroughly in tepid water.

Foamy sauce for suet and fruit puddings is often not all that its name implies. The cause of failure is apt to be due to the fact that the butter, sugar and fruit juice are not rubbed to a sufficiently creamy consistency, or else that the sauce is stirred after the melting begins. To make it, rub two cupfuls of sugar to a very light cream with three-fourths of a cupful of butter. Then add by the teaspoonful, beating

## A Pocket Time Ball

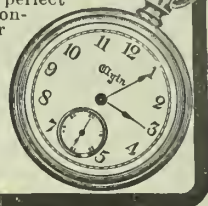
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constantly, one cupful of fruit juice. Just before using float the bowl containing the mixture in boiling water until it is dissolved, but do not stir after this begins.

Soap jelly is made by shredding many little pieces of white soap into hot water, and dissolving them. If they do not melt readily the soap is not shredded finely enough, in which case the pail can be set on the stove for a few minutes. If there are any pieces left over they may be saved for future use. Pour enough of the jelly into the water to make a stiff lather.

Strawberry Bavarian cream is a delicious dessert for strawberry time. Mash one quart of berries, and add one cupful of sugar. Let them stand until the sugar is dissolved. If a very nice looking dessert is wanted, the seeds may be strained out through a fine sieve. In the meantime soak out one-half box of gelatine in one-half cupful of cold water for half an hour. Then dissolve it in one-half cupful of boiling water. When it is cool add it to the fruit. As soon as the mixture begins to thicken, fold in two cupfuls of cream whipped to a stiff froth. Turn into a mould and stand in a cold place to set.

#### Domestic Hints.

SUMMER SQUASH.—Wash and peel two large summer squash, cut in small pieces and remove the seeds, cover with boiling water and cook until tender. Drain in a colander and press gently as much of the water out as possible with a potato masher, then mash through the colander into a saucepan, put it on the stove and let it cook until the squash is quite dry, taking care that it does not burn. Then add four heaping tablespoonfuls of butter, a teaspoonful of sugar, and salt and pepper to taste.

WELSH RAREBIT.—Chafing dish. Have ready one tablespoonful of butter creamed with one level teaspoonful of constarch, one-fourth teaspoonful of salt, and few grains of cayenne, also one-half pound cheese, grated or crumbled fine; one-half teaspoonful of mushroom catsup and some wafers or squares of delicate toast. Heat one-half cup of cream in the blazer, and blend with it the butter mixture. When thick set it over the hot water, add the cheese and catsup, stir still melted, then pour it over the wafers.

STRAWBERRY SHORTCAKE.—Beat a half cupful of sugar with the yolk of one egg. Add a half cupful of milk and two level teaspoonfuls of baking powder sifted with flour enough to make a batter as thick as that required for the usual cake. Fold in the stiffly beaten white of the egg and bake in two layer tins. Crush the berries and sweeten them with powdered sugar two hours before using them. Serve with whipped cream or with a dressing made of pineapple or strawberry juice thickened with constarch. About one teaspoonful of constarch will be required for one and a half cupfuls of juice. The cake should be very light, with no hint of toughness.



## S. F. Market Report.

### Produce Market.

SAN FRANCISCO, July 24, 1901.

#### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Dec.
Wednesday.....	67 1/4 @ 68 1/4	69 1/4 @ 70 1/4
Thursday.....	67 1/4 @ 68 1/4	69 1/4 @ 70 1/4
Friday.....	67 1/4 @ 68 1/4	69 1/4 @ 70 1/4
Saturday.....	67 1/4 @ 68 1/4	69 1/4 @ 70 1/4
Monday.....	69 1/4 @ 70 1/4	71 1/4 @ 72 1/4
Tuesday.....	69 1/4 @ 70 1/4	71 1/4 @ 72 1/4

#### LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	5s 6 1/4d	5s 7 3/4d
Thursday.....	5s 6 1/4d	5s 7 3/4d
Friday.....	5s 6 1/4d	5s 7 3/4d
Saturday.....	5s 6 1/4d	5s 7 3/4d
Monday.....	5s 6 1/4d	5s 7 3/4d
Tuesday.....	5s 6 1/4d	5s 7 3/4d

#### SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 01 1/4 @ 1 01 1/4	—
Friday.....	1 01 1/4 @ 1 01 1/4	—
Saturday.....	1 01 1/4 @ 1 01 1/4	—
Monday.....	1 03 1/4 @ 1 04 1/4	1 07 1/4 @ —
Tuesday.....	1 03 1/4 @ 1 04 1/4	—
Wednesday.....	1 03 1/4 @ 1 04 1/4	1 07 1/4 @ —

#### WHEAT.

Speculative values have ruled higher, owing to drouth in the middle West, but prices for spot wheat have not improved correspondingly. Offerings in the spot or sample market were not particularly heavy, and it was the exception where any undue selling pressure was exerted, but with the immediate needs of shippers of very slim volume, values were not as a rule especially well maintained. Owing to a strike among laborers at Port Costa, ship loading and handling of grain at that point was seriously interfered with part of the time, but even if this impediment had not been in the way, it is not probable that any very great activity would have been experienced. Foreign demand was far from active, especially at full current figures, and ships available for grain loading remained in light supply. Several ships arrived under charter, and were added to the grain loading fleet at rates ranging from £1 15s to £1 19s 3d to Cork or Queenstown for orders to United Kingdom, Havre, Antwerp or Dunkirk. Very few ships are obtainable, however, under £1 17s 6d, and to secure especially desirable vessels an advance on this figure has to be paid. The visible supply in the United States east of the Rockies was on Monday given at 27,681,000 bushels, indicating a decrease of 297,000 bushels for the week. A year ago stocks in the section above named were 45,631,000 bushels.

#### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.01 1/4 @ 1.01 1/4.  
May, 1902, delivery, \$1.07 1/4 @ —.  
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.03 1/4 @ 1.04 1/4; May, 1902, \$1.07 1/4.

California Milling, old ..... \$1 02 1/4 @ 1 05  
Cal. No. 1 shipping, alongside..... 97 1/4 @ 1 00  
Oregon Valley..... 97 1/4 @ 1 02 1/4  
Washington Blue Stem..... 1 00 @ 1 05  
Washington Club..... 97 1/4 @ 1 00  
Off qualities wheat..... 95 @ 97 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

1900-01. 1901-02.  
Liv. quotations..... 6s 2 1/4d @ 6s 3d 6s 0d @ 6s 0 1/4d  
Freight rates..... 37 1/4 @ 40s 37 1/4 @ 40s  
Local market..... \$1 05 @ 1 07 1/4 97 1/4 @ 1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

#### FLOUR.

Market is not noteworthy for firmness, but at the same time is not quotably lower. The immediate demand is not very brisk, although there is considerable flour moving outward to South America and the Orient, most of which is being delivered on previously made contracts.

Superfine, lower grades..... 82 25 @ 2 40  
Superfine, good to choice..... 2 50 @ 2 75  
Country grades, extras..... 3 00 @ 3 25  
Choice and extra choice..... 3 25 @ 3 50  
Fancy brands, jobbing..... 3 50 @ 3 65  
Oregon, Bakers' extra..... 2 75 @ 3 15  
Washington, Bakers' extra..... 2 75 @ 3 25

#### BARLEY.

A large proportion of offerings was export and brewing grades, with the demand for the same far from active, particularly at full prices, and values were in consequence somewhat better sustained for common feed qualities than for the better

sorts. There is good prospect, however, for considerable barley going to Europe during the season. The market has been lately seriously handicapped, not only by scarcity of ships and high freight rates, but also by labor strikes of grain handlers. Speculative dealings in barley were limited and fluctuations in Call Board values were not of a pronounced order.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	77 1/4 @ 82 1/2
Chevalier, No. 1 to choice.....	— @ —
Chevalier, No. 2.....	— @ —
Chevalier, poor.....	— @ —

#### OATS.

The market for Red oats is not showing as much activity as earlier in the month, not owing to lack of inquiry or absence of desire to operate, but for the reason that the holders are in most instances asking firmer figures than have been paid for the bulk of Reds lately secured. Blacks of ordinary quality are not much sought after and are salable only at a rather low range of values. A few Whites and Grays are arriving, but not many of these are looked for until the early part of September.

White Oats, fancy feed.....	1 17 1/4 @ 1 22 1/4
White, good to choice.....	1 10 @ 1 15
White, poor to fair.....	97 1/2 @ 1 05
Gray, common to choice.....	1 00 @ 1 10
Milling.....	1 20 @ 1 25
Surprise, good to choice.....	1 20 @ 1 25
Black Russian.....	85 @ 1 00
Red.....	90 @ 1 15

#### CORN.

Firmness of the market and light spot supplies continue to be prominent features. There is very little or no probability of there being heavy stocks or materially low prices for some time to come. Eastern markets bid fair to be unfavorable to buyers the entire season.

Large White, good to choice.....	1 40 @ 1 45
Large Yellow.....	1 40 @ 1 42 1/2
Small Yellow.....	1 55 @ 1 60
Eastern, in bulk (carload lots).....	1 35 @ 1 37 1/2

#### RYE.

Market remains quiet, with prices at about same quotable range as for some weeks past, but free sales are not possible at top quotations.

Good to choice, new..... 75 @ 80

#### BUCKWHEAT.

Very little doing in this cereal at present, and no great amount of business is looked for very soon. Values for the time being are not very clearly defined.

Good to choice..... 1 50 @ 1 75

#### BEANS.

Some transfers of Pink beans are reported, and market for this variety shows a slightly better tone than for some weeks preceding, but the market as a whole has been quiet, and is likely to so continue until new crop begins to arrive in quotable quantity. In a few weeks Sacramento river beans of current crop will commence to put in an appearance.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 60 @ 4 90
Lady Washington.....	3 50 @ 3 75
Butter.....	— @ —
Pinks.....	1 40 @ 1 65
Bayos, good to choice.....	2 30 @ 2 50
Reds.....	3 00 @ 3 25
Red Kidney.....	4 25 @ 4 50
Limas, good to choice.....	6 15 @ 6 25
Black-eye Beans.....	2 75 @ 3 25
Horse Beans.....	1 00 @ 1 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

#### DRIED PEAS.

There is no new feature to record. Market is quotably unchanged, but only for select Green are prevailing values being well maintained.

Green Peas, California.....	2 00 @ 2 50
Niles Peas.....	1 50 @ 1 75

#### WOOL.

Dealers are not averse to inspecting samples, and are doing considerable purchasing. More wools would be changing hands at full current rates, if present stocks were not mainly medium and coarse wools, while fine wools are the sort principally sought after. There are some coarse wools changing hands, however, but in the main at a rather low range of prices.

#### SPRING.

Humboldt and Mendocino.....	14 @ 15 1/4
Humboldt and Mendocino Lambs.....	11 @ —
Northern, free.....	12 @ 13
Northern, defective.....	10 @ 11
Middle Counties, free.....	10 @ 11
Middle Counties, defective.....	9 @ 10
Southern, 12 mos.....	8 @ 9
Southern, free, 7 mos.....	7 @ 8
Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

#### HOPS.

There are no evidences of much doing in this article, either in spot goods or new

to arrive. Hops of last crop are so nearly cleaned up that there is little opportunity at this date for any noteworthy trading in them. Values remain nominally as last noted. New are expected to be on market in quotable quantity in a few weeks.

Good to choice 1900 crop..... 15 @ 17 1/2

#### HAY AND STRAW.

Most descriptions of hay have been in quite liberal receipt, causing the market to present an easy tone, especially for other than select Wheat and fine Alfalfa. Quotations were not materially changed, but sales at extreme figures were more the exception than the rule. It is the general opinion of dealers that values will remain close to present range for some weeks to come.

Wheat, good to choice.....	7 50 @ 10 00
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 00 @ 8 50
Barley and Oat.....	6 00 @ 8 50
Alfalfa.....	7 00 @ 9 00
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 3/4 bale.....	25 @ 42 1/2

#### MILLSTUFFS.

Market continued about as unfavorable to buyers for mill offal of all descriptions as for some weeks preceding. Generally higher rates were asked for Milled Corn. Rolled Barley was quite steadily held.

Bran, 3/4 ton.....	17 50 @ 18 50
Middlings.....	20 00 @ 22 00
Shorts, Oregon.....	17 50 @ 18 50
Barley, Rolled.....	16 50 @ 17 50
Cornmeal.....	20 00 @ 30 00
Cracked Corn.....	20 50 @ 30 50

#### SEEDS.

Nothing doing in Alfalfa or Mustard. Market is practically bare of the latter. There is a small amount of trading in Bird Seed within range of the quotations noted.

	Per ctt.
Mustard, Trieste.....	— @ —
Mustard, Yellow.....	— @ —
Flax.....	2 50 @ 3 00
Alfalfa, Utah.....	— @ —
Alfalfa, California.....	— @ —
	Per lb.
Canary.....	3 1/4 @ 3 1/4
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 @ 3 1/4

#### BAGS AND BAGGING.

Although Grain Bags are quoted the same as for a week or two preceding, being on the basis of 8 1/2c. for standard Calcuttas, this figure is being shaded to buyers in many if not the majority of instances. The season is nearly ended, and as predicted in this column at the beginning, there are Grain Bags still for sale and will likely be to the end, despite the cries made of shortage during the past few months.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	8 1/2 @ 8 1/4
San Francisco Grain Bags, 22x36, spot.....	— @ 8 1/4
State Prison Bags in lots of 2000, 3/4 100.....	— @ —
Wool Sacks, 4 lbs.....	32 1/2 @ 35
Wool Sacks, 3 1/2 lbs.....	30 @ 32 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/4 @ 7 1/4

#### HIDES, PELTS AND TALLOW.

A fairly active demand for Hides is being experienced at full current rates. Pelts are in moderate request at unchanged values. Tallow is meeting with a moderately firm market, quotable figures remaining as before.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/4 @ —	9 @ —
Medium Steers, 48 to 56 lbs.....	9 1/4 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/4 @ 9	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/4 @ 9	8 @ —
Wet Salted Kip.....	9 1/4 @ —	8 1/4 @ —
Wet Salted Veal.....	9 1/4 @ —	8 1/4 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	2 00 @ —
Salted Horse Hides, medium.....	2 00 @ —	1 75 @ —
Salted Horse Hides, small.....	1 00 @ —	1 00 @ —
Dry Horse Hides, large.....	1 00 @ —	1 00 @ 25
Dry Horse Hides, small.....	1 00 @ —	1 00 @ —
Dry Colts' Hides.....	50 @ —	50 @ —
Pelts, long wool, 3/4 skin.....	75 @ 100	75 @ 100
Pelts, medium, 3/4 skin.....	50 @ 75	50 @ 75
Pelts, short wool, 3/4 skin.....	30 @ 40	30 @ 40
Pelts, shearling, 3/4 skin.....	10 @ 25	10 @ 25
Deer Skins, best summer.....	25 @ —	25 @ —
Deer Skins, good medium.....	— @ 30	— @ 30
Deer Skins, thin winter.....	— @ 10	— @ 10
Elk Hides.....	10 @ 12	10 @ 12
Tallow, good quality.....	4 1/4 @ —	4 1/4 @ 4 1/4
Tallow, No. 2.....	4 @ —	4 @ —
Goat Skins, perfect.....	30 @ —	30 @ 37 1/2
Goat Skins, damaged.....	10 @ 20	10 @ 20
Kid Skins.....	5 @ 10	5 @ 10

#### HONEY.

Dealers are not bidding up to any noteworthy extent, so far as made public, but are not securing much honey at their ideas of values. In a small way higher figures

than are quoted are realized, but quotations below given represent extreme values obtainable in transfers of round lots. Stocks in this center are not large.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/4 @ 5
Extracted, Amber.....	4 @ 4 1/4
White Comb, 1 lb frames.....	11 @ 12 1/4
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7 1/4

#### BEESSWAX.

Not much offering and values are quotably unchanged. It is doubtful, however, if heavy quantities could be placed at extreme current figures.

Good to choice, light, 3/4 lb.....	26 @ 28
Dark.....	24 @ 25

#### LIVE STOCK AND MEATS.

Market for Beef has not changed materially since last review, but has presented a rather easy tone. Mutton is commanding fairly steady values, present offerings being just about sufficient for immediate demand. Lamb and Veal were in limited stock and sold to good advantage. Hogs brought much the same prices as preceding week, with no very heavy arrivals and market moderately firm.

Beef, first quality, dressed, net 3/4 lb.....	6 1/4 @ 7
Beef, second quality.....	6 1/4 @ 6 1/2
Beef, third quality.....	6 @ —
Mutton—ewes, 6 1/4 @ 7 1/4; wethers.....	7 @ 8
Hogs, hard grain fed, medium.....	6 1/2 @ 6 1/4
Hogs, small, fat.....	6 1/2 @ 6 1/4
Hogs, large, hard.....	5 1/2 @ 6
Hogs, feeders.....	— @ —
Hogs, country dressed.....	7 1/4 @ 7 1/2
Veal, small, 3/4 lb.....	9 @ 10
Veal, large, 3/4 lb.....	8 @ —
Lamb, spring, 3/4 lb.....	8 1/4 @ 9

#### POULTRY.

Demand was lighter than previous week. Receipts of domestic product were of fair proportions, and Eastern was in liberal receipt, as compared with requirements, four carloads of imported arriving within the week. As can be readily inferred, the market inclined against sellers, the changes made in quotations being without exception to a lower range of values. Young stock, more especially medium size to full grown, sold at a marked decline.

Turkeys, live hens, 3/4 lb.....	8 @ 9
Turkeys, live gobblers, 3/4 lb.....	8 @ 9
Hens, California, 3/4 dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 00 @ 5 00
Fryers.....	3 50 @ 4 00
Broilers, large.....	2 50 @ 3 00
Broilers, small.....	1 50 @ 2 00
Ducks, old, 3/4 dozen.....	2 50 @ 3 00
Ducks, young, 3/4 dozen.....	3 00 @ 4 00
Geese, 3/4 pair.....	1 00 @ 1 25
Goslings, 3/4 pair.....	1 12 1/2 @ 1 25
Pigeons, old, 3/4 dozen.....	1 50 @ 1 75
Pigeons, young.....	1 50 @ 1 75

#### BUTTER.

Values for choice to select fresh, creamery and dairy, were tolerably well sustained at last quoted range, with some sales of specials above utmost figures warranted as quotations. For the more common grades, however, the market is weak and slow. Stocks of cold storage are heavy, and dealers are now beginning to draw on same.

Creamery, extras, 3/4 lb.....	19 @ 20
Creamery, firsts.....	18 @ 19
Creamery, seconds.....	— @ —
Dairy, select.....	18 @ 19
Dairy, firsts.....	17 @ 17 1/4
Dairy, seconds.....	15 @ 16
Dairy, soft and weedy.....	— @ —
Mixed store.....	13 @ 14
Creamery in tubs.....	18 @ 19 1/4
Pickled Roll.....	— @ —
Irkin, California, choice to select.....	17 @ 18
Irkin, common to fair.....	15 @ 16

#### CHEESE.

Market is rather lightly stocked with domestic product and presents fully as firm a tone as last noted. There is considerable Oregon, Utah and Eastern cheese, with market for imported hardly so firm, relatively, as for home product.

California, fancy flat, new.....	9 @ 9 1/4
California, good to choice.....	8 1/4 @ 9
California, fair to good.....	8 @ 8 1/4
California Cheddar.....	— @ —
California, "Young Americas".....	9 1/4 @ 10 1/4

#### EGGS.

The market has been somewhat unsettled since last review, and prices have averaged lower than during preceding week. The unsettled condition was due to decreased inquiry on local account and to rather heavy offerings of low-priced Eastern warm weather eggs. The latter were offered down to 14c. in small lots. A few eggs of extra select quality from nearby points went to special custom at a moderate advance on quotations.

California, select, large, white and fresh.....	18 @ 19
California, select, irregular color & size.....	16 @ 17
California, good to choice store.....	14 @ 15
Eastern, good to choice.....	15 @ 18



up to \$1.05 on wharf. Red Onions are now hardly in sufficient stock to warrant quoting. Tomatoes were in materially increased receipt and sold at a decided decline from the figures which had been ruling.

Asparagus, # box.....	50 @ 1 50
Beans, String, # lb.....	1 1/4 @ 2 1/2
Beans, Lima, # lb.....	3 @ —
Beans, Wax, # lb.....	2 @ 3
Cabbage, choice garden, # 100 lbs...	50 @ 60
Cauliflower, # dozen.....	50 @ —
Corn, Green, # sack.....	50 @ 1 00
Corn, Green, Alameda, # large crate. 1	00 @ 1 50
Cucumbers, # small box.....	25 @ 35
Cucumbers, Bay, # large box.....	40 @ 65
Egg Plant, # box.....	75 @ 1 25
Garlic, # lb.....	2 @ 3
Okra, Green, # lb.....	10 @ 15
Onions, Yellow Danver, # cental.....	95 @ 1 05
Onions, New Cal. Red, # cental.....	35 @ 50
Peas, Sweet garden, # lb.....	2 @ 2 1/2
Peas, good to choice, # sack.....	1 00 @ 1 50
Peppers, Green Chile, # sack.....	75 @ 1 25
Peppers, Bell, # box.....	1 00 @ 1 50
Squash Summer, # small box.....	20 @ 35
Summer Squash, Bay, # large box.....	1 00 @ 1 25
Tomatoes, River, # large box.....	30 @ 75
Tomatoes, # small box.....	15 @ 25

#### POTATOES.

A good shipping demand was experienced during part of the week and very fair inquiry on local account. So long as dealers were not handicapped by lack of teaming facilities for handling stock, owing to strike, prices were very well maintained, with bulk of sales within range of \$1.10@1.30 for good to choice Burbanks, some fancy going higher. The strike of the teamsters, however, necessitated some cutting in rates, owing to difficulty in getting stock moved.

Burbanks, Petaluma-Tomales, $\frac{3}{4}$ ctl.	—	@	—
Burbanks, Oregon, $\frac{3}{4}$ cental.....	—	@	—
Burbanks, Salinas, $\frac{3}{4}$ 100 lbs.....	1 00	@	1 50
River Burbanks, in boxes, $\frac{3}{4}$ cental.	1 00	@	1 25
River Burbanks in sacks, $\frac{3}{4}$ cental..	85	@	1 10
Early Rose, $\frac{3}{4}$ cental.....	90	@	1 15
Mission Garnet Chile, in sacks.....	1 00	@	1 15

#### The Fruit Market.

#### FRESH FRUITS.

The market for fresh fruits remained about as last noted until the teamsters of the city went on a strike Monday, which unsettled values for nearly all kinds of fresh fruits, owing to great difficulty in securing teams and moving consignments. That this condition of affairs will long exist is altogether improbable. In fact, there is some relief already from the tie-up mentioned, dealers and receivers being able to do more in the movement of round lots of fruit from wharves and warehouses than at the beginning of the strike. Owing to the unsettled condition of values within the past few days, the market is somewhat difficult to quote, but figures below given represent as nearly as possible wholesale prices in force at the close. Values in the jobbing market were better maintained as a rule than in the wholesale market, where heavy teaming was required for the handling of fruits in bulk.

Apples, Gravenstein, # 4-tier box ..	1 00 @ 1 25
Apples, Red Astrachan, # 50-lb. box.	40 @ 1 00
Apples, green, # small box.....	15 @ 30
Apricots, Royal, # box.....	30 @ 50
Apricots, fair to choice, # ton .....	12 50 @ 27 50
Blackberries, # chest.....	3 50 @ 5 00
Cantaloupes, # crate.....	1 75 @ 3 50
Crabapples, # small box.....	35 @ 50
Currants, # chest.....	— @ —
Figs, 1-layer box, 65@90c; 2-layer....	1 50 @ 2 00
Grapes, Seedless, # crate.....	1 25 @ 1 50
Grapes, Black, # crate.....	1 00 @ 1 50
Grapes, Fontainebleau, # crate.....	75 @ 1 00
Grapes, Muscat, # crate.....	1 00 @ 1 25
Grapes, Tokay, # crate.....	1 00 @ 1 25
Logan Berries, # chest.....	4 00 @ 6 00
Nectarines, # box.....	30 @ 65
Nutmeg Melons, # crate.....	1 00 @ 1 75
Pears, Dearborn Seedling, # box.....	40 @ 65
Peaches, # box.....	25 @ 50
Pears, River Bartlett's, # 40-lb. box..	75 @ 1 25
Plums, # box.....	20 @ 40
Prunes, # box.....	35 @ 60
Raspberries, # chest.....	5 00 @ 6 00
Strawberries, Longworth, # chest..	3 50 @ 5 00
Strawberries, Large, # chest.....	3 00 @ 4 50
Watermelons, # 100.....	8 00 @ 20 00
Whortleberries, # lb.....	8 @ 10

#### DRIED FRUITS.

The market for cured and evaporated fruits has not shown much life since last review, so far as outward evidence and reports go in this center. Some cite the teamsters' tie-up, or strike, as a contributing cause to the quietude, but why this should prove more than a mere temporary incident in the way of retarding trade in the dried fruit line is difficult to conceive. Although the apricot market is quoted weak, choice qualities are not going begging for custom, nor are they obtainable in noteworthy quantity at materially lower figures than have been current at any time this season. In not a few instances holders refuse to let go at current quotations. It is estimated that from a fourth to a third of the current crop has been already placed. Apples are being firmly held, with spot stocks light, and the outlook is bright for market ruling

favorable to sellers throughout the season, owing to shortage in apple crop East. In new peaches not much has yet been done. Limited quantities of choice are offered for early delivery at 5 1/2c. f. o. b. in carload lots. Pear market is wholly nominal at present, but there is every prospect that stiff prices will rule, as the output this season will be light. Pitted plums are quotable nominally at 5@6c. for new stock; moderate quantities of red are reported offering at the inside figure. There are some new Black Figs in sacks on market, and they are hard to place in a wholesale way at over 3 1/2c. The Prune market remains quotably as last noted for spot stocks, but outside offerings are practically all gone from first hands, giving Association goods control of the situation for the time being. That Prune prices will rule stiffer the coming season is about as well assured as anything in the future can be, although there are reports current of some non-Association stock having been contracted for on basis of 2c. for the four sizes, September delivery.

#### EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 @ 7 1/2
Apricots, Royal, choice, in sacks, # lb. 8	@ 8 1/2
Apricots, Moorpark.....	— @ —
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/2 @ —
Apples, 50-lb boxes, rings, pressed, good to choice.....	3 1/2 @ 4 1/2
Figs, White, fancy pressed.....	— @ —
Nectarines, # lb.....	4 @ 5
Peaches, unpeeled, fancy.....	5 1/2 @ 5 1/2
Peaches, unpeeled, choice.....	3 1/2 @ 4
Peaches, peeled, in boxes.....	11 @ 13
Pears, unpeeled Bartlett's, halved, fancy. 5 1/2	@ 6 1/2
Pears, halved, unpeeled Bartlett's.....	3 1/2 @ 4 1/2
Pears, quartered, unpeeled Bartlett's....	3 1/2 @ 4 1/2
Plums, Black, pitted.....	3 1/2 @ 4 1/2
Plums, White and Red.....	4 1/2 @ 5
Prunes, Silver.....	4 1/2 @ 6

#### COMMON SUN-DRIED.

Apricots.....	5 @ 6
Apples, sliced.....	2 @ 2 1/2
Apples, quartered.....	2 @ 3
Figs, Black.....	3 @ 3 1/2
Figs, White.....	3 @ 4
Peaches, unpeeled.....	2 @ 3
Pears, prime halves.....	2 1/2 @ 3 1/2

Prices for 1900 crop Prunes, as named by the California Cured Fruit Association: District No 3, four sizes, 3c. per lb.; 40-50s, 4 1/2c; 50-60s, 4 1/2c; 60-70s, 3 1/2c; 70-80s, 3 1/2c; 80-90s, 2 1/2c; 90-100s 2 1/2c; 100-120s, 1 1/2c; 120 up, 1 1/2c. The selling price of Prunes for District No. 1 is 1/2c. per pound less, and for District No. 2 1/2c. per pound less than for District No. 3.

#### RAISINS.

Business is of a rather light order, and it would be unreasonable to expect otherwise at this date. Values as quoted by the Growers' Association remain unchanged. Seeded Muscatels in 1-lb. cartons continue to be offered at 5 1/2c. Sultanas have all passed into second hands; the last transfer was of about forty carloads, three-fourths being unbleached, these going at 5c. The bleached were mainly low grade and are said to have averaged very little over 6 1/2c.

#### F. O. B., CARLOAD LOTS.

Imperial Clusters, 6-crown, # 20-lb box.....	3 00 @ —
Dehesa Clusters, 5-crown.....	2 50 @ —
Fancy Clusters, 4-crown.....	2 00 @ —
London Layers, 3-crown, # box.....	1 60 @ —
do do 2-crown, # box.....	1 50 @ —
(Usual advance for fractions.)	
Loose Muscatel, 4-crown standard, # lb.....	— @ 7
Loose Muscatel, 3-crown.....	— @ 6 1/2
Loose Muscatel, 2-crown standard..	— @ 6
Loose Muscatel, seedless.....	— @ 6 1/2
(Above prices for loose raisins are for 50-lb boxes.)	
Seeded Raisins, 1-lb packages, # lb. 5 1/2	@ —
Loose Muscatel Pacifics, 5 1/2c, 5 1/2c and 5c. for 4, 3 and 2 crown respectively.	
Thompson Seedless.—Bleached fancy, # lb., —c; choice, 9c; standard, —c; prime, —c. Unbleached 7 1/2 @ 9c.	
Sultanas.—Bleached fancy, # lb., —c; choice, 8 1/2c; standard, —c; prime, —c. Unbleached, 7c.	

#### CITRUS FRUITS.

The Orange market is lightly stocked and exceedingly quiet. Valencia's are the only kind now quotable, and there is not much inquiry from any quarter at present for this or any other variety of orange. Lemons are in fair request, with market moderately firm at prevailing rates for best qualities. Limes are cheaper than last quoted, supplies being more liberal.

Oranges—Navel, # box.....	— @ —
Seedlings, # box.....	— @ —
Valencias, # box.....	2 50 @ 3 50
Grape Fruit, # box.....	— @ —
Lemons—California, select, # box.....	3 00 @ 3 25
California, good to choice.....	2 00 @ 2 50
California, common to fair.....	1 00 @ 1 75
Limes—Mexican, # box.....	5 00 @ 5 50

#### NUTS.

Practically nothing doing at the moment in either Almonds or Walnuts, and no spot stocks of consequence to operate upon. This year's crop of the Davisville Almond Growers' Association, estimated at about 130 carloads, will be submitted for bids on August 3d. Peanuts rule steady.

California Almonds, shelled.....	18 @ 22
California Almonds, paper shell, # lb.....	12 @ 14

California Almonds, soft shell.....	10 @ 12
California Almonds, hard shell.....	6 @ 7
Peanuts, California, fair to prime.....	4 1/2 @ 5 1/2
Peanuts, Eastern, hand-picked.....	5 1/2 @ 6
Pine Nuts.....	5 @ 6

#### WINE.

There is practically nothing doing in the way of transfers of wines from first hands, the market being about bare of offerings from growers. Firmness of tone is fully as pronounced as previously noted. Quotable values for dry wines of last season's vintage remain nominally at 22@25c. per gallon. Wine grapes of crop now maturing have been contracted for at \$25 per ton, and it is likely that strictly choice will command the coming autumn an advance on this figure.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks.....	127,652	274,483
Wheat, centals.....	22,210	342,850
Barley, centals.....	58,045	143,320
Oats, centals.....	23,800	49,341
Corn, centals.....	440	8,240
Rye, centals.....	1,505	1,995
Beans, sacks.....	776	2,452
Potatoes, sacks.....	26,032	58,644
Onions, sacks.....	4,127	12,527
Hay, tons.....	4,544	9,668
Wool, bales.....	1,066	3,919
Hops, bales.....	—	—

#### EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks.....	92,040	230,900
Wheat, centals.....	—	302,263
Barley, centals.....	5,112	30,001
Oats, centals.....	—	340
Corn, centals.....	2,202	3,874
Beans, sacks.....	2	394
Hay, bales.....	—	110
Wool, pounds.....	168,700	168,700
Hops, pounds.....	162	11,535
Honey, cases.....	5	229
Potatoes, pack's... 591	5,210	1,323

#### California Dried Fruit at New York.

NEW YORK, July 24.—Evaporated apples, common, 3 1/2 @ 4c; prime wire tray, 5 1/2 @ 5 1/2c; choice, 6 @ 5 1/2c; fancy, 6 1/2 @ 7c. California Dried Fruits.—Demand is fair and values are tolerably steady. Prunes, 2 1/2 @ 3 1/2c. Apricots, Royal, 8 @ 12 1/2c; Moorpark, 9 1/2 @ 14c. Peaches, unpeeled, 7 @ 10c; peeled, 11 @ 14c.

HAPPY FATHER—We've got a new baby at our house. Friend—So? What do you call him? Happy Father—We don't call him; he does all the calling himself.—Detroit Free Press.

## Long Lasting Roofing

P & B Ready Roofing is the longest lasting roofing it is possible to buy. Buildings roofed with P & B never leak nor give any roof trouble. The heat doesn't affect it, rain snow and cold weather won't hurt it; gases, fumes and acids do not injure it whatever.

Time is the only enemy and it gives time a long, long, weary race.

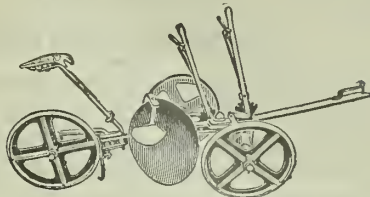
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#### Rotary Disc Plows.



All the plow manufacturers have been making experiments of this style of plow, and this is evidence that they see sufficient merit in the principle of the disc plow to try to determine if they can make the plow so that it will do good work under all conditions. The Benicia Agricultural Works of Benicia, Cal., evidently have struck upon the right model, for they have placed orders to put up over 1000 of these plows for next season. From all accounts, it will be a surprise to other disc plow manufacturers, and many applications for agencies are already being made to the selling agents, Baker & Hamilton, San Francisco, Sacramento, Los Angeles.

## GLENN RANCH, Glenn County, :::: California, FOR SALE In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

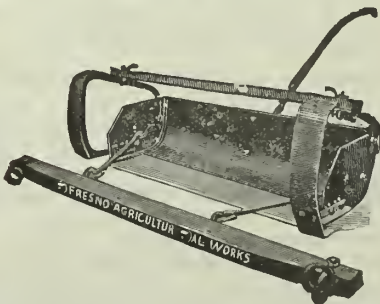
For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

#### F. C. LUSK,

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## FORESTRY.

### The New Bureau of Forestry.

On the 1st of July the Division of Forestry and three other scientific divisions of the U. S. Department of Agriculture were advanced to bureaus. This was provided for by the last session of Congress, which appropriated for the expenses of the Bureau of Forestry during its first year \$185,440. The appropriation for the Division of Forestry during the year just ended was \$88,520. For the year 1898-99 it was \$25,520.

These figures show how rapidly the forest work of the Government has expanded of late, and also how well it has commended itself to Congress. There was a time when the practical value of the scientific investigations carried on by the Government was not fully understood, and farmers were inclined to think that the money spent on experiment stations and chemical laboratories was of little benefit to them. Now the case is very different. The improvements in agriculture due to the work of the Department have increased the value of the farm products of the country by many millions of dollars annually. As this kind of work has proved its practical utility, Congress has shown itself generous toward it. The readiness with which Congress has increased the appropriations for the Division of Forestry is the best evidence that forestry has proved its importance from a business standpoint.

The change from a division to a bureau, and the larger appropriation, will make possible both an improved office organization and more extended field work. The Bureau will be provided with a much larger office force and will be organized in three divisions. But field work, not office work, is what the Bureau exists for. This work has been going on during the last year from Maine to California and from Georgia to Washington. It includes the study of forest conditions and forest problems all over the country, the giving of advice to owners of forest lands, and the supervising of conservative lumbering operations which illustrate forest management on business principles. This work can now be greatly extended. Private owners of some three million acres have applied for this advice, which in every case requires personal examination, and about 177,000 acres have been put under management. This land is in many tracts, large and small, and is owned by individuals, clubs and corporations. Several State governments have also asked the aid of the Bureau. But the greatest demand is that of the Department of the Interior of the National Government, which has asked for working plans for all the forest reserves, with the enormous total area of about 47,000,000 acres.

**ORGANIZATION OF THE BUREAU OF FORESTRY.**—The Bureau of Forestry is made up of the Division of Forest Management, the Division of Forest Investigation and the Division of Records. Each of these continues, with enlarged facilities, work which was in progress under the old Division of Forestry.

The Division of Forest Management is in charge of Overton W. Price, the former Superintendent of Working Plans. When the owner (private or public) of woodland wishes to consider the possibilities of his property if handled as a constant source of timber supply, the tract must be examined by an expert to ascertain the condition of the standing timber, the prospects of reproduction, the facilities for marketing, the best method of harvesting the present crop so as to secure the largest present and future yield, and the likelihood of success under management. A preliminary report is then made. If the owner decides on management, a working plan follows. This involves a careful study of the rate of growth of the different kinds of marketable timber, the computation of the proper interval between cuttings and of the amount of timber to be harvested, and, if desired, the recommendation of the necessary regulations to enable the work to go on under contract. All this falls to the Division of Forest Management.

The Division of Forest Investigation, under the charge of Geo. B. Sudworth, makes studies of trees—of their rapid growth, distribution, reproduction and habits—and investigates all the forest problems connected with fires, lumbering, grazing, tree planting, stream flow and erosion.

The Chief of the Division of Records is Otto J. J. Lucbkert. It takes charge of all office and routine matters, and also has custody of the library of literature bearing on forestry, and of a unique collection of photographs, which is continually being added to, illustrating forest conditions all over the United States.

**RECENT WORK OF THE DIVISION OF FORESTRY.**—The result of the work of the Division has been to turn practical forestry in the United States from a doubtful experiment into an assured success. Special studies of some of the most important trees, commercially, have been made, from which can be calculated their probable future yield. Cheap methods of harvesting the present lumber crop without injuring the productivity of the forest have been put in operation. Such concerns as the Great Northern Paper

Company and the Deering Harvester Company have been led to undertake conservative management for their forest properties. Meanwhile, the work of tree planting, particularly in the almost treeless Western States of the plains, has been furthered; the relation of the forest to the volume of streams, erosion, evaporation and irrigation have been studied; matters connected with irrigation and water supply have been investigated; hopeful progress has been made in the direction of regulating grazing in the Western reserves in a manner fair both to the important interests of cattle and sheep owners and to those who look to the reserves as a source of continuous supply of wood and water; and studies of forest fires were conducted with a view of reducing the great yearly loss from this source, a loss which has been estimated at \$50,000,000.

Field work is to go on this summer in seventeen States. There are in all 179 persons engaged in the work of the Bureau. Of this number eighty-one are student assistants—young men, largely college students, who expect to enter forestry as a profession, and who serve during the summer on small pay for the sake of the experience gained.

## THE FIELD.

### Millets for Dry Countries.

Prof. McClatchie of the Arizona Experiment Station says the number of inquiries received concerning the culture of millet indicates considerable interest in this forage crop. While there is probably no section of the Territory where it should be made a primary crop, yet as a catch crop or a supplementary crop it has a place in Arizona agriculture. A crop may be secured in so short a time after seeding, that a farmer may often utilize a piece of land that might otherwise grow up to weeds, and supplement his supply of forage without interfering much with the growing of the regular staple crops.

There are a great many varieties of millet grown in the United States, each possessing certain merits. Some are better adapted to dry regions than others, and some will make a crop on land too poor for other varieties. These varieties may be arranged into three groups: Foxtail millets, Barnyard millets and Broomcorn millets. The most of those grown in the United States belong to the first group, characterized by having compact, bristly foxtail-like heads. To this group belong Common millet, German millet, Golden Wonder millet and Hungarian millet. The Barnyard millets have branched heads and are closely related to the grasses that grow in summer along irrigating ditches and in other moist places, and known in southern Arizona as "water grasses." To this group belongs the "Ankee" grass of the southwest, Shama millet or Jungle Rise, and Sanwa millet. The second variety is simply a cultivated form of the grass with leaves banded with purple stripes that grows so luxuriantly along Arizona ditch banks during warm weather. The Broomcorn millets have bushy heads resembling more or less those of broomcorn. The seeds of this group are white, yellow or red. The varieties are numerous, the best known in the southwest being the Manitoba, California Beauty, French, Turkish and Hog millet.

Millets are grown for two purposes: for forage and for the seed. The forage is fed to both cattle and horses, but principally to the former. The seed is used for both human food and food for stock. The use of the seed for human food is confined to the Old World almost exclusively. For seed for stock feed the Broomcorn millets are the principal ones grown in this country.

The Foxtail millets are the ones grown most extensively in this country, and of this group the one most generally grown in Arizona is German millet. These millets not only endure excessive heat and bright sunshine, but will make a crop with less water than others. The Common millet is the hardest of the group and endures drouth the best. German millet gives a heavy yield under favorable conditions, but requires more water. The hay is coarser than that of Common millet. The Hungarian millet does not endure drouth as well as Common millet, but under favorable conditions usually gives a heavier yield. For a crop of seed the Golden Wonder millet is the best of the Foxtail millets, the forage being coarse. This variety endures less drouth than any of the Foxtail varieties mentioned.

Millets prefer a rich, mellow, loamy soil, thriving in neither heavy clay or adobe soil, nor in a light, sandy soil. While it is better to prepare the soil well, millet may be sown on quite rough land. Where the soil is not too compact or the surface covered with too rank a growth of weeds, it may be simply "disked" in. This method is especially applicable to stubble land after the grain is off.

Millet is a warm weather plant, thriving in heat and sensitive to cold. In southern Arizona it may be sown any time from the first of May to the end of September. While it may be sown early in the summer, it is not usually advisable to do so, as the month of June is apt to be very trying on it, irrigating water commonly being short as well as the air dry.

The most favorable time is during July and August, the exact date advisable depending on the weather, the water supply and local conditions. The time that the forage is desired may also be a factor in deciding upon the time to sow. The varieties vary considerably as to the length of time required for growth, but the average time is about two months. As it is quite sensitive to frost it must be sown early enough to reach the stage desired before there is danger of freezing. Thirty to forty pounds of seed of the Foxtail or Broomcorn millets is the usual amount sown per acre, and fifteen to thirty pounds per acre of the Barnyard varieties. Rich, well prepared land requires less seed than poor or rough land. Sowing too little seed is likely to result in coarse-stalked hay. Most varieties of millet enjoy plenty of water, hence there is little danger of irrigating the crop too heavily during July, August or September.

Millet should be cut before the seed begins to ripen, especially if it is intended for horses. But it should not be cut too green, as the hay is liable to have a somewhat laxative effect upon stock. Less harm results, however, from cutting it too green than cutting it too ripe. The best time to cut it is considered to be when the majority of the heads have distinctly appeared. It should not be permitted to become entirely dry in the swath, but should be raked when partially dry and allowed to cure in cocks.

Instead of cutting the millet it may be pastured within a month or so after being sown. Varieties that make a second growth from the roots, such as Common millet and Hungarian millet, are best suited for pasturing. Poor alfalfa pastures may be much improved during the hot weather of summer by "disking" in millet seed where the supply of irrigating water makes it possible.

## MISCELLANEOUS.

IN filing and setting saws attention should be paid to certain points. The teeth in crosscut saws should cut both ways. In every saw, crosscut and rip, the teeth should, as near as possible, be equal in length and equal in sharpness. The bevel on the tooth should be more acute for soft than for hard woods. In filing to get the same bevel, the file should be held at the same angle for all the teeth, and the same number of strokes with the same pressure should be given. Uneven teeth should be beveled with a flat file before starting to sharpen and bevel. Filing should be done from the handle toward the point. In no case should the saw be lower in the middle than at the ends. The feather from the sides of the teeth should be removed with a flat file or whetstone drawn smoothly over them with a very light pressure. The setting of the saw is important, as it controls the width of the kerf. The amount of the set depends on the character of the work and is a matter of personal judgment. Uniformity of the set must be secured. Either a hammer and punch is used in setting or a special tool of a lever type. The use of either requires practice and care.

THE quantity of water flowing in any channel is obtainable in cubic feet per second by multiplying the cross-sectional area of the waterway by the mean velocity of flow. The important point is the determination of this velocity. Floats are timed over a measured length of channel, several tests being made in different lines of parallel flow. The surface velocity for different sections is thus obtained. The velocity is much less at the bottom and sides of a channel and the average velocity is ordinarily between 80% and 90% of the maximum surface velocity. Generally 83% is taken as the coefficient. The quantity of flow then becomes equal to the cross-sectional area of the waterway multiplied by .83 of the surface velocity determined by floats. A second method of getting at the quantity of flow is by measuring the discharge through an orifice, either a tube or weir. The critical point of this method is the measuring of the head under which the flow is maintained.

FOR massive concrete work it is often safe and practicable to use in the body of the structure large boulders and pieces of broken stone and thereby effect a considerable economy of cement where the economy is important. Where such material is used it should be solid and clean and should not contain iron oxides or sulphides, but be of similar character to the broken stone employed in the concrete mixture. As much as 30% of this coarse stone can be used. In the construction of the overflow dam and ditch headworks in the American river at Auburn, Cal., the large stream boulders and cobbles were so used. The fine gravel and sand just as it came from the river bed was used in mixing the concrete. The dam is over 300 feet long and has a midstream height of 40 feet.

TEXAS fuel oil differs considerably from California fuel oil. The former has a gravity about 22° Baume as compared with 14° to 16° Baume, flashing point 180° F. as compared with about 240° F., firing point 200° F. compared with 290° F., and its weight averages 7.43 pounds to the gallon as compared with 8 pounds to the gallon. The Texas oil contains the most sulphur and the California oil the more alkali and salty waters.

AS the result of comparative tests of California and Texas fuel oils by the Southern Pacific Railroad the former was found to be about 2% the better in evaporative power. Theoretically the Texas oil should have proven the better owing to a lower proportion of oxidized oils.

THE oil tank recently made for the Market Street Railway Co. of San Francisco is 90 feet in diameter and 30 feet high, and contains 1,260,000 gallons.



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SAN FRANCISCO, CAL.**THE VETERINARIAN.**

Answers by Dr. Creely.

**DYING AT CALVING.**

TO THE EDITOR:—I would like to know what causes the cows to lose their calves. Just as soon as the calf is born he is dead, and the cow is left in a weak condition across the kidneys. Some of the calves do not die just as soon as born, but can not stand up, are weak in the back and then die in about six or eight hours. Others live for two days and stand to suck under great difficulty, then die. All the cows are left weak across the kidneys; all being large at first, but now during hot weather are minute. All are born at the proper time and are not "slunk calves."—SUBSCRIBER, Knights Ferry.

This condition is undoubtedly due to smutty food; a change of pasture and food would remedy it. The history should give an account of abortions or premature birth.

**SKIN TROUBLE OF THE HORSE.**

TO THE EDITOR:—I have a mare that has some form of itch; she bites herself continually, and there are some small, round spots on her body where she has been biting herself. The spots are about the size of a ten-cent piece; there is no matter in them, being perfectly dry. What can I do for the same?—L. HOLTZ, Lodi, Cal.

Give a good physic of six to eight drachms of Barbadoes aloes dissolved in one pint of warm water, also once daily thereafter the following powders—one each day: Iodide potash, 1½ oz.; nitrate potash, 4 oz.; powdered Columba root, 1 oz.; mix and make twelve powders. Apply the following once daily to parts affected after thoroughly scrubbing with hot water and green soap: Creoline, 4 oz.; salad oil, 4 oz.; coal oil, ½ oz.; mix.

**SKIN CRACKS ON SHOATS.**

TO THE EDITOR:—Of about thirty head of hogs, five large and twenty-five shoats, in the bird rape and mustard, some six shoats have got, particularly on the hind legs, cracks like mange, and drag or either lift their hind legs in a queer way. The hind part seems to be affected. This bird rape seems to be too laxative for them. Please advise a struggling beginner what to do.—CHAS. KOERNER, Sherwood, Mendocino county.

Apply the following ointment over the cracks: Sulpho-iodide ointment and glycerine. Apply every third day. Give the following powder in the feed: Nitrate potash, 2 oz.; gentian root, 4 oz.; iron citrate, 1 oz.; bi-carbonate soda, 1 lb. Give one-half teaspoon daily to hogs.

**FOR SMALL SWELLINGS IN THE HORSE.**

TO THE EDITOR:—I have a mare eleven years old; she is in good condition and is worked on the ranch. Her ribs and flanks are covered with little lumps about the size of cherry pits and they seem to irritate her a good deal, for when I bring her into the stable from work she turns round and bites herself. Will you kindly tell me what I can do to cure her?—A SUBSCRIBER, Alma.

Give internally one-half ounce daily Fowler's solution of arsenic. Apply externally the following: Bi-chloride mercury, 1 drachm; water, 1 quart; mix. A good scrubbing occasionally with warm carbolic acid water and tar soaps would be beneficial. If the horse is in good condition, cut down on the grain and feed mashes and wethay.

**TICKS IN CALVES' EARS.**

TO THE EDITOR:—Enclosed find specimen of tick which I find in ears of calves four months old, also in ears of one Holstein bull purchased about fourteen months ago, but which was not in healthy condition when I received him. The calves came from Humboldt county about five weeks ago. I have lost two calves.

They first seem to get dumpish, do not eat hearty, swell at the base of the ears, the eyes water and run, and mouth and nose run also. I found five or six ticks in each ear. Was the death of the calves due to the tick or some other cause? What is best to apply to the ears to destroy the ticks? I put a small quantity of sheep dip in their ears. Is that sufficient or too strong for the ear? Will the ticks spread from one animal to another? Will total immersion in some insecticide be necessary to get rid of them?—F. MILLER, Dos Palos.

Sheep dip, unless diluted, is too strong for the ears. The ticks, while harmful, are not of the malignant type, but they are bound to spread unless you isolate the sufferers and get rid of the ticks.

**FOR BARBED WIRE WOUNDS.**

TO THE EDITOR:—I have a colt that has been cut with barbed wire. What is good to use for the cut?—JOHN LIGHT, Modesto.

Wash with warm carbolic water (one teaspoonful of acid to one pint of water); use castile soap; apply tincture of iodine (diluted) once daily.


DR. E. J. CREELY.

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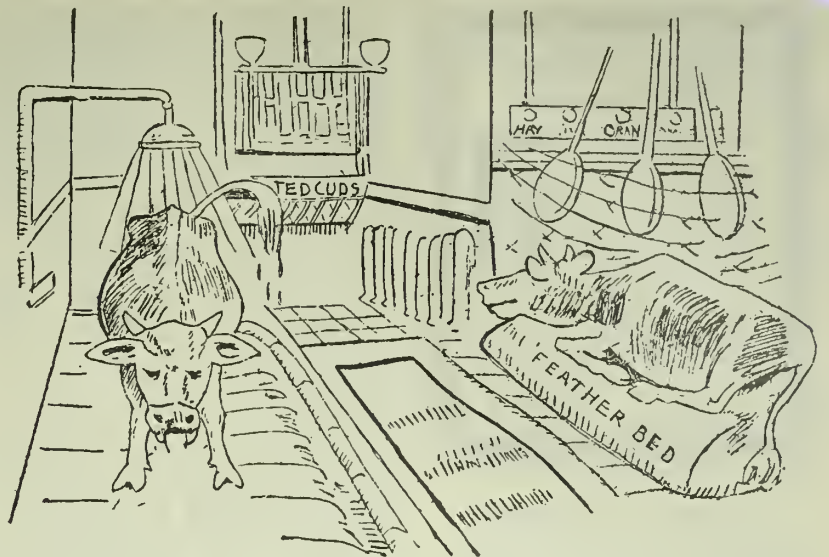
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MATILDA'S DUKE 2d, 46406, by Matilda's Duke, tracing back to Stoke Pig's, the greatest bull the world has ever known.

**AMONG THE FEMALES IN THE HERD ARE:**

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## CEREAL CROPS.

### Wheat Growing and Transportation.

The quarterly session of the Sacramento Valley Development Association was held Saturday of last week in this city for the purpose of meeting with the railroad and steamboat authorities to discuss ways and means of aiding the wheat growers of the valley by reducing freight rates on grain. Neither of the river transportation companies was represented in the conference, but William Sproule of the Southern Pacific met with the association and discussed the subject fully and freely.

Before the arrival of Mr. Sproule, says the Chronicle report, the matter was informally discussed by those present, and it was decided to ask for a flat reduction of 25% on grain rates for Sacramento valley points, but when the meeting entered into a discussion no request was specifically made, but simply a general request made that some help be extended to the wheat growers.

**THE GROWERS' SIDE.**—After the question had been presented to Mr. Sproule I. R. Garnett stated the situation briefly and forcibly. In substance he said: "We cannot raise wheat in the Sacramento valley at the present price and railroad rate. A 25% reduction will let us live. There is no profit in wheat raising in an average year, but the farmer is of a hopeful nature, and he sows when he does not know whether he is going to reap or not. We do not want to quarrel with the railroad. What we want is to talk together as one business man to another. Wheat has gone down and the charges have remained the same. The railroad is equally interested with the farmers. We have bought lands of the railroad and paid 50% more for it than we can sell it for to-day. We have impoverished ourselves for the railroad, and now we cannot raise wheat any longer and pay the freight. Railroad facilities have improved and you can haul cheaper. We would not enter a protest were we not down to a point where we cannot raise grain at a profit. Thousands of acres of land will be abandoned this year if the railroad does not do something to help us out. Your charges are now about 15% to 20% of the net value of our grain."

**THE RAILROAD VIEW.**—Other talks were made along the same lines by A. Hochheimer, A. R. Briggs, William Beckman and Frank Miller, and then Mr. Sproule was asked to make some suggestions. He opened by conceding that their interests were mutual, and said:

"If you go backward and the production of the State declines, the railroad has nothing to expect but that which is harmful to its interests. We have nothing to sell but transportation. We have sold you all our lands, and have nothing now left to sell but our carrying power. The question of the status of grain raising in California is of much concern to the interests which I represent. These matters are of great importance to us who have charge of bringing in revenue to the railroads. It has been stated here that grain rates have not been reduced in the last fifteen years, and in the letter apprising me of your meeting the same statement has been made. If you believe this to be true, then this meeting

has been called under a misapprehension, for the rates have been materially reduced a number of times since 1894. Two years ago these same arguments were brought to bear upon the railroad, and the rates at that time were reduced to meet the request. Since that time the price of grain has not increased, but, in fact, it is higher now than it was then. I wish to meet you in all friendliness, but I wish to say that the assertion that the railroad is responsible for present conditions has not been proven. Should we reduce the freight rate, we have no assurance that the charter rates for ocean carriage would not be proportionately increased. The present situation is largely due to a peculiar condition which has existed for the past three years. The advancement of the commercial prosperity of the world has been greater than the supply of ships, and the result has been an increase in the charter rate. We believe that at the present time our rates are as reasonable as we can make them. If we were to carry wheat free the difference would be taken up by the charter rates. The price of wheat has not fallen since we reduced to meet you, but the charter rates have advanced. We should not be compelled to suffer for this."

**FRIENDLY FEELING.**—"The question is not, 'Will you lose or not?'" said R. G. Trumbull, "but will you meet the farmer who is being forced out of business? The farmer must go out of business unless he gets relief. Can you as carriers afford that relief?"

"The company which I represent," replied Mr. Sproule, "is solicitous for the welfare of the farmer of California. I do not see how the railroad can reduce its rates on grain. I do not; however, say anything final. It seems to me that the company has already got down as low as possible, and I know we are as low as any other company on the Pacific coast. I am glad to meet you in this friendly talk, and feel that I am in company with friends. The railroad has nothing but friendly feeling for the farmers."

**TO PURSUE THE MATTER FURTHER.**—Mr. Sproule having delivered himself of the friendly expression, which offered nothing in the way of relief, took his departure. As the association was not satisfied with this summary dismissal of its efforts, it was decided that I. R. Garnett, chairman of the transportation committee, select a committee for further conference with the railroad, and in pursuance of this idea he selected to aid him in his endeavor to get lower rates H. E. McCune, J. W. Hartford, William Bettman and H. H. Seaton, who will see what further can be done in the matter and then report to the organization at some future date.

### New Patents.

DEWEY, STRONG & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING JULY 9, 1901.  
677,935.—BARBED FENCE—C. C. Benson, San Diego, Cal.  
678,157.—DYNAMO—B. Bjarnason, Seattle, Wash.  
677,951.—NECKTIE HOLDER—P. M. Cady, S. F.  
677,961.—RAILWAY CAR—G. W. Douglas, S. F.  
677,962.—TRACK BRAKE—G. W. Douglas, S. F.  
677,961.—TERRA-COTTA WARE—E. G. Durant, Pasadena, Cal.  
678,239.—TRUSS BRIDGE—T. G. Gilligan, Union, Or.  
677,982.—PISTON VALVE—J. T. Heffernan, Seattle, Wash.  
678,247.—LIFE RAFT—J. V. Janin, Seattle, Wash.  
677,992.—BLUESTONING SEED—A. J. Johnson, Arhuckle, Cal.  
678,018.—PROTRACTOR PATTERN—J. M. McFarland, Los Angeles, Cal.  
678,014.—VALVE SEAT—E. H. Merrill, S. F.  
678,025.—VEHICLE WHEEL—G. V. Orton, Monterey, Cal.  
678,197.—BED AWNING—L. Price, Los Angeles, Cal.  
678,198.—CENTRIFUGAL PUMP—J. Richards, S. F.  
678,199.—CENTRIFUGAL PUMP—J. Richards, S. F.  
678,201.—PROTECTING TIMBER—C. Schallberger, Seattle, Wash.

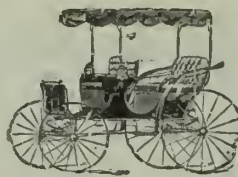
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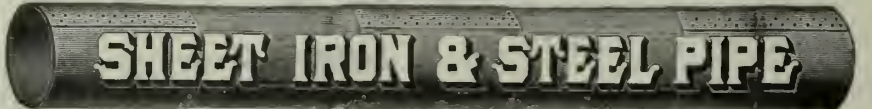
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III. The Fruit Soils of California.	XXIII. The Quince.
IV. The Wild Fruits of California.	XXIV. Vine Propagating and Planting.
V. California Mission Fruits.	XXV. Pruning and Care of the Vine.
VI. Introduction of Improved Fruit Varieties.	XXVI. Grape Varieties in California.
VII. Clearing Land for Fruit.	XXVII. The Date.
VIII. The Nursery.	XXVIII. The Fig.
IX. Budding and Grafting.	XXIX. The Olive.
X. Preparation for Planting.	XXX. The Orange.
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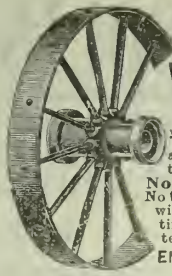
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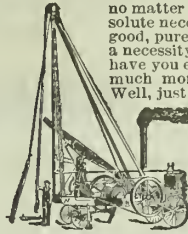
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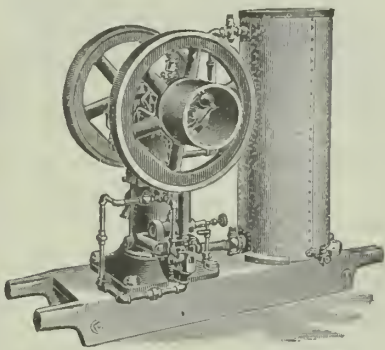
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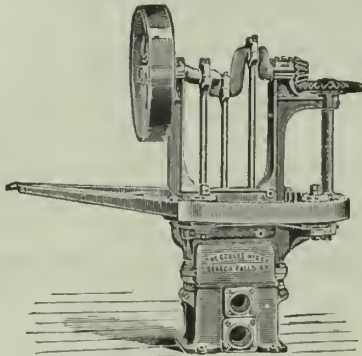


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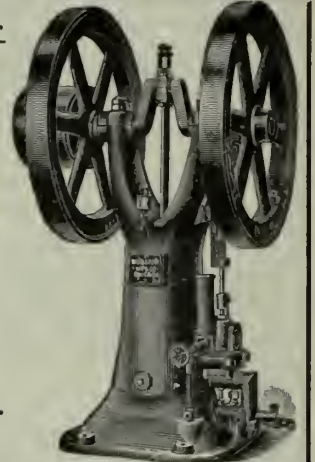


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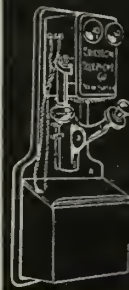
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 5.

SAN FRANCISCO. SATURDAY, AUGUST 3, 1901.

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Office, 330 Market St.

### In the California Foothills.

In recognition of an important region of California which does not, perhaps, figure in current horticultural discussion to the degree of its worth, we choose this week characteristic scenes in the region of the Sierra foothills. This region extends for hundreds of miles along the east side of the Sacramento and San Joaquin valleys, and though parts of it, where traversed by railways, have received splendid development and are yielding in large quantities characteristically excellent products, the region as a whole has received thus far but scant recognition and remains a largely undeveloped resource of the commonwealth. The time will come, however, when it will support a dense population and yield an immense surplus of the finest productions. The greater part of the foothills is at present too remote from the railways which chiefly traverse the valleys from north to south. There will be ultimately more east and west cross lines or spurs which will render available vast areas for home and farm making. The incalculable water power in the mountains invites the projection of many trolley lines in the foothill region. It is reported from New England that trolley lines are revolutionizing farming methods and motives and bringing new life into districts which seemed sinking into innocuous desuetude. The same agency will bring development to new regions in California which now seem to lie crushed beneath the lash of the stage driver. We have, it is true, too scant a population at present to warrant too great indulgence in such opening enterprises, but with proper effort, coincident with such enterprises, ample population will be attracted and located. The ample motive power and irrigation supplies, the charms of the picturesque landscape, the climate salubrious for plant and man, and the soil—warm, rich and inviting—all these are resources of the foothills which should not always be undeveloped.

The opening of the foothill region can now proceed with much greater assurance than was formerly warranted. The mineral and timber enterprises of the higher altitudes are active and promising; the tourists of the world are coming in constantly increasing numbers. Local markets are constantly improving and the demand for distant shipment from those parts whence transportation is provided is increasing. It is time now to develop farming in the foothills, not alone in fruit lines, which are probably their chief glory, but in all lines of high-class animal and plant products which the markets in the higher mountains demand. Vast quantities of produce are now carried by team from the valleys through the foothills which should produce them. This idea is now gaining freer recognition and should be carried further. Many old residents of the foothills have never learned what can be profitably done with their lands, and they need less disposition to accept old declarations of failure and more eagerness to make trial and to confer among themselves about diversification of products and how to wisely secure it under local conditions. We look upon the foothills, with their



Cottage at the Foothill Sub-Station of the University of California.

favoring climate and ample water supply, as likely to be in the future the most noted portion of the State for quality and variety of products which the markets will esteem.

The agricultural department of the University has always shown its faith in the foothills by its effort to demonstrate their resources and adaptations. One of the first local experiment stations established was near Jackson, in Amador county. It was somewhat remote from the district opened by the overland railway, and one idea in departing from this was the assurance that a new district might be opened and a demonstration of the advantage of wider development made. The expectation was, however, that the local enterprise which met the requirement of lands and buildings was but a part of the general progressiveness of the locality which would not be content with stage-line transportation. Progressive plans did not, however, materialize as expected, and the station, about 5 miles beyond Jackson, has never been able to render such wide-reaching service as anticipated. It has, however, furnished many important demonstrations which will increase in value as the retarded development of the district becomes accelerated, as it must surely be. These demonstrations could help thousands as well as hundreds, and they are waiting to be more fully employed.

The engravings present scenes on the experiment station grounds, near Jackson, and are suggestive of foothill conditions. The cottage shows how tasteful and satisfactory a home can be secured at moderate cost and how light a style of building suffices in the mild foothill climate. The glimpse at one corner of the station farm shows the transformation wrought by clearing and planting as contrasted with the uncleared slopes around it. Though there are steep slopes which should always perhaps retain their native growths, the foothills are as a rule gentle slopes and small plateaux, such as the picture shows, and eminently suitable for cultivation. These varying topographies, included within the station boundaries, have been tested for many different cultures, of which the details are found in the University publications, and many of which can be seen or heard of by visits to the establishment, which is always open to those who wish to learn by local inquiry and observation.



Cleared and Uncleared Slopes at the Foothill Station in Amador County.

A CROW HUNT will be undertaken by western Washington farmers soon. The crows are very troublesome, and by following them over an extended area it is thought they can be driven out.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, August 3, 1901.

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## The Week.

The weather has behaved itself very well this week and has maintained its normal features while Eastern people and products have been blistering in fervent heat and grievous drouth. Much work has been done by producers but they have been balked in the results in many cases by the people who largely live by pushing the product into consumption. The temperature has risen very high in all circles within the embargo and it is to be hoped that some way out of the trouble may be speedily found.

Spot wheat has lost 25 cents per ton; options are unsettled and mostly moving downward. The world's wheat crop is held to be large, and in the Eastern United States it has for the most part escaped the heated term which has crushed the corn crop. Local labor troubles also made occasion for crowding down prices, and the bears have the advantage in this as well as in the scarcity of ships—only one having appeared in two weeks. Barley is slow but unchanged; oats, quiet and steady; corn, scarce and high. There is something doing in both colored beans and Limas and rates are higher. Bran is still scarce, and offerings are above buyers' views. Few mills are now running. Hay receipts are light and prices unchanged. Beef is easier; mutton quiet, while hogs are firm at old figures; though local grain hogs and Eastern are arriving, the demand keeps up with them. Butter is weak and lower; cheese steady. Choice fresh ranch eggs are firmer and receipts of this class are light. Poultry has improved, chiefly large, fat chickens, both old and young. There is a good call for potatoes, both local and for shipment overland, and more could be sold if they could be readily handled. Onions have declined, some having sold for less here than they cost on the river. Shipments are prevented by lack of crates the box factories having closed because of the strike. Small local fruit trade is good, as retailers do their own hauling. Some large lots are getting movement to canneries in spite of the trouble. Oranges are high and the best lemons firm, though low grade are low. Dried fruits are in good demand from the East; apples, peaches, apricots and prunes are all in request. A notable prune sale is cited below. Seedless raisins are cleaned up. Nuts are unchanged. Hops are quiet and all hands waiting. Wool is in active demand for free at full rates. A little fall wool is now selling.

This hateful strike is hurting our agriculturists severely, and we are clear enough in the conviction that such results as are now destroying value in

good products ought not to be possible. Just how to prevent them we know as little about as the next one, but that does not disqualify one from pronouncing them abominable and exasperating. We have every condition favoring the profitable sale of every pound of fruit and vegetables that California can spare because of the heat shrinkage of these products at the East, and yet the strike interferes at every step from box making to train loading, and the favoring market conditions are brought to naught. No wonder the State Board of Equalization hesitates about advancing valuations in either grain or fruit counties, because those who lost the crop in the winter have only suffered earlier than those who are now losing the proper profit by difficulties in handling and transportation.

How the Eastern people will this year need fruit in all its forms—fresh, cured and canned—can be inferred from a great sale reported this week from San Jose of 24,000,000 pounds of prunes by the California Cured Fruit Association. The buyers are said to be Eastern dealers, and the sale includes all the small prunes from the 100 size up, and disposes of all the fruit of these sizes in the hands of the Association. This leaves only large sizes under 100 on hand, and will assure a good price for the balance of the left-over crop. The sale was made on the basis of 1½ cent per pound for 100s to 120s, and 1¼ cent for 120 and over for Santa Clara county stock, and a proportionate price for fruit from the other districts of the State. These are the full Association prices for these sizes.

A San Mateo county subscriber asks us how it is about the statements credited to certain Missouri professors that the codlin moth is largely caught by light-traps, while the weight of evidence from economic entomologists is that it is not. All that we actually know about it is that in all the catches which we have seen from light-traps there were no codlins, but no end of moths. On this basis and that of other observers who know codlins when they see them, we cling to the belief that the codlin does not fly to a light-trap until we have demonstrated to the contrary. This belief is not shaken by apparently inspired declarations by Missouri professors to the contrary. A certain Missouri trap seems to catch many lawyers, professors and others, if we are to judge by the statements which are freely mailed to us; but until one of these advocates crawls out of the oil with a codlin moth in his fist, our name is Thomas.

It is telegraphed from Santa Barbara that President Ellwood Cooper has appointed Mr. John Isaac secretary pro tem of the State Board of Horticulture, in accordance with the power entrusted to him by the Board at its last meeting, as described in the PACIFIC RURAL PRESS last week. Mr. Isaac has long been in the employ of the Board as assistant to Quarantine Officer Crow and is familiar with the detail of the duties entrusted to him.

There is to be a summer meeting of the American Forestry Association in Denver, August 27 to 29, which should be attractive to Californians who have leisure and means for travel. The circular which we receive is particularly attractive because it gives assurance that this meeting will be a distinctively Western one, and its proceedings of special interest to all concerned with the forest problems before the Western States—fires, grazing, relations of forests to water supply, etc. The Federal Government more than ten years ago recognized the importance of the preservation of the forests in protecting the timber resources and conserving the water supply, and there have now been established in the States and Territories west of the Mississippi river forty forest reserves, containing nearly 47,000,000 acres. There will be addresses by several Western statesmen and an illustrated lecture by Mr. Gifford Pinchot, Forester of the United States Department of Agriculture, entitled "The Government and the Forest Reserves." Special investigations have been pursued during the last year by a number of experts under Mr. Pinchot's direction, and perhaps the results will be foreshadowed. It is expected that the President of the Association, Hon. James Wilson, Secretary of Agriculture, will attend the meeting and preside at one or more sessions. It will be good to be there.

## QUERIES AND REPLIES.

### Budding or Grafting the Peach.

TO THE EDITOR:—I thank you for the very explicit and full information you have furnished in regard to my inquiry, about working native plums on peach trees, in the PACIFIC RURAL PRESS of July 27. There is just one matter you have mentioned, however, which makes it necessary for me to encroach upon your time, if you will have the kindness to give me a little further information. In the last sentence of your answer you state: "You can bud at any time during the next two months in the new wood of the peach."

I have never understood that it is necessary to bud only in new wood of the peach. In your work on "California Fruits," under the head of "The Peach," in the sub-division headed "Working Over Old Trees," the following appears: "Buds are successfully set in quite old wood, providing buds from well matured wood are taken."

With this in mind, I had supposed that it would be entirely practicable to place the buds, if desirable, in the trunk of the peach tree; but, in view of the reference to new wood contained in your letter, I am somewhat in doubt as to whether you would recommend budding at all in old wood, or, at least, I infer that you consider it preferable to bud in new wood. In this connection allow me to add I have five or six peach trees at my place in San Mateo county that have been planted ten years which are branched so high from the ground, namely, 3 to 4 feet, that they are somewhat of an eyesore, and I had decided to cut off the heads entirely, leaving about 2 feet of trunk, with the view of forming new heads at a proper distance from the ground, and, at the same time, securing more desirable varieties. If you do not recommend budding in the old wood, which of the following three courses would you advise me to adopt?

First.—Cut back the trunk at once—or in a few days, as soon as the present crop be gathered—to the proper distance, with a view of letting new shoots form, into which buds may be placed during the latter part of September, as was advised by J. W. Mills in regard to the apricot, in the issue of the PACIFIC RURAL PRESS of April 13th last.

Second.—Cut off the heads next spring and bud the following autumn.

Third.—Cut out the trees entirely and plant new and more desirable varieties.—AMATEUR, San Francisco.

Budding on the old bark of the peach should be, according to our observation, undertaken earlier in the season, and, as the buds are seen to have taken, the branch should be partly severed or broken at a distance beyond the bud, so as to force growth upon the bud during the current summer. We are not aware of any case in which the buds, set as late as this in old bark and trusted to remain dormant until the following season's sap flows, have proved satisfactory. Buds in old bark seem to need coaching along without any long interval of dormancy to favor the drying and shrinking back of the bark. We do not think that working in the bark on an old peach stump would be at all satisfactory; even if the buds should take, which would be doubtful, any growth would have but a poor attachment to the trunk, and the branches would break out when they attained size and weight. Besides, the amputation would not heal over in the peach and would need to be carefully watched to prevent the entrance of decay. Budding in old bark in the peach is not done in the main stem, but usually on the top sides of branches above the forking. This would be of no value to you in reducing the height of the heads of your trees.

We would not think of cutting back old peach trees to the trunk at this time of the year. The chances are that the stumps would be killed outright. Such cutting back should be done very early in the growing season, so as to get good, strong shoots immediately afterwards, into which buds should be set about this time of the year, or a little later.

We really believe that far more satisfactory results could be obtained by grubbing out the old trees, plowing the land deeply and planting new trees this coming winter. By this course, with attention in forming the heads and in shaping, you will quickly get beautiful trees of just such height and form as you prefer. It would be impossible, even with the best success in cutting back and budding over, to get any such uniformity, strength and thrift.

### Lecanisms on Orange Trees.

TO THE EDITOR:—I send some twig leaves from my orange, pomelo and lemon orchard at Fair Oaks which are troubled with scale. Last season when I showed some of the brown scale to Mr. Lelong, he said that I need not feel concerned, as a parasite de-



stroyed the scale; but I have noticed a tendency this season to an increase of the scale, and in some trees there seems to be black scale. The trees can not thrive, though I noticed ladybugs at work on several trees. Please inform me if I should spray my trees now and the best spray to use.—E. I. GALVIN, Sacramento.

It is true that the brown orange scale is usually held in check by parasitic insects; but wherever these are in abundance, spraying or fumigation has to be resorted to. The black scale is less liable to parasitic injury than the brown and requires thorough attention everywhere. In southern California most growers rely upon fumigation, and this is about the time of the year to begin it. It is also the best time of the year to spray for the black scale, because the young scales are now all hatched and susceptible. In San Diego particularly there are a number of citrus fruit growers who believe in the use of the distillate spray (described in the PACIFIC RURAL PRESS of January 26, 1901) for these lecanium scales. It is undoubtedly effective, but there is difficulty in reaching all parts of the citrus tree with any sort of a spray. That is the reason why fumigation is preferred by the larger growers.

Woolly Aphis Once More.

To THE EDITOR:—Will you please give me a recipe for killing woolly aphis on apple trees? I have used the spray of sulphur, lime and salt, also bisulphide of carbon.—GROWER, Tulare county.

The woolly aphis is a very hard insect to exterminate. The lime, salt and sulphur wash would destroy the insect if it were on the top of the tree in the winter when that wash is applied, but the stronghold of the insect is in the roots and from the roots the top is continually repopulated. The effort to destroy it on the roots with carbon bisulfide has been variously reported upon, but its efficiency is not yet clearly made out. If the woolly aphis can be prevented from collecting in too large numbers around the root crown the tree can endure its presence on the smaller roots for a great many years and still be profitable. Treatment, then, which gives the best results in accomplishing this purpose consists in removing the soil from around the base of the tree so as to expose the root crown and the main roots, filling in with several pounds of tobacco dust (which is made by grinding up the refuse of the cigar factories) and then covering again with earth. If this is done at the beginning of the rainy season the water leaches out the tobacco and the extract kills the insects. Wood ashes are also used for the same purpose by using them freely around the trunk of the tree at the beginning of the rainy season. In this case the lye leached from the ashes kills the insects which are near the surface. The insects upon the top of the tree during the summer time can be destroyed by a good spray of kerosene emulsion applied with much force. It is very probable that our recourse to escape this insect in the future will be to plant only apple trees grafted upon roots which are not injured by this insect. Such roots are now being introduced by our nurserymen and really furnish the best means of escape from this very troublesome pest.

What About This Kind of a Peach?

To THE EDITOR:—I have a peach that I believe to be a seedling which is pronounced by fruit dealers here to be the finest peach they know. It is a fine mottled red and white color, free, exquisite flavor, ripening a few days later than the Early Crawford. It is good-sized, a splendid bearer and the first good peach to ripen after the Crawford. Would it be worth propagating?—GROWER, Sacramento.

From what you say of the seedling peach it seems as though it might be a very attractive variety for amateur growers or perhaps for sale in local markets, but the characters which you mention as attractive are not the most desirable from a commercial point of view. A mottled red or white color is inferior, both for canning and drying, to a solid color. Either a clear white or a clear yellow are very much better. Just now for large commercial use like shipping East, or canning or drying, the preference is strongly for a very firm yellow peach; and while the clingstones have their present popularity, it would be very doubtful whether such a variety as you describe would be worthy of propagation. Again, such a peach earlier than the Crawford would be very much more valuable than the same

peach later than the Crawford. Considered from these points of view, which seem to rule desirability of propagation on a large scale, it would be very doubtful whether the variety of which you speak would prove valuable except for home use.

Ills of Cherry Trees.

To THE EDITOR:—I note your answer to my question about the shy bearing of the Royal Ann in the PACIFIC RURAL PRESS of July 20. Is there any fertilizer that would be good to make cherry trees produce more fruit? If so, please name the same and what amount to the tree.

I have a friend here who has a cherry orchard on very black land. Every spring the trees have curl leaf the same as peach trees have, and then the trees die. He wishes to know what to do, if anything.—A. B., San Jose.

There is some reason to think that the application of phosphate fertilizers promotes fruit bearing in the tree when other conditions are favorable. Thomas' phosphate powder is a good source of phosphoric acid for the use of the tree, because it is slowly soluble and the effect will last for some time. The application of 1000 pounds to the acre would not be excessive for good-sized trees. It should be put in at the winter plowing. It is sold by Balfour, Guthrie & Co. of San Francisco, who will send pamphlets, on application, describing the use of fertilizers.

The cherry never has the same curl leaf which affects the peach. It is probable that your friend has land which holds too much water in the winter, and that the curling of his leaves is due to injury to the roots by this water, the trouble commonly known as "sour sap." The remedy in this case would be underdrainage to prevent standing water during the winter season.

Probably Lack of Moisture.

To THE EDITOR:—Enclosed find a grape-vine leaf. The vines are nine years old; oak trees previously occupied the ground. The leaves turn red and die one month sooner than the rest of the vineyard. What is the cause and remedy?—SUBSCRIBER, Cloverdale.

The leaf shows the reddening characteristic of natural maturity and has no clear token of disease. It is most likely that the vine is hastened to premature dormancy by lack of moisture, and this is due to the lack of retentiveness in the soil or to imperfect cultivation. Where vines suffer in this way the land should be plowed early in the rainy season so that all the water possible may sink deeply into the soil; and then at the end of the rainy season and before the land has a chance to dry deeply, the surface should be well cultivated, and this cultivation should be repeated at least once a month during the dry season as long as the work can be done without injury to the canes. If such good winter and summer cultivation does not enable the vines to retain good green foliage as long as the rest of the vineyard, arrangements must be made to summer irrigate. No tree or vine can be profitable which can not get moisture enough to make a perfect summer growth.

Injured Watermelon Roots.

To THE EDITOR:—I send two watermelon vines whose roots are affected. Others are dying in the same way. In one case I found a small white worm about 1/2 inch long near the root, and in all the hills a great many saw bugs, but nothing else. Can you tell me the trouble and the remedy?—A SUBSCRIBER, Rio Vista.

The roots show mechanical injuries, probably inflicted by ground pests, such as wire worms, saw bugs, etc. No certain indication of fungus disease was found. The use of soot from stovepipe or chimney is deterrent of these pests when placed in the hill at planting. Nitrate of soda sprinkled very sparingly around the young plants and washed in by a shower, or by sprinkling after the plants have started up well, also has a good effect. Probably, however, the best way to escape ground pests, both insects and fungi, is to practice rotation and keep melons from following each other on the same land.

Cracking of French Prunes.

To THE EDITOR:—A good many of my French prunes are cracked—some trees about three-quarters cracked. The trees have been well trimmed and the ground well worked. Please let me know the reason for it.—GROWER, Walnut Creek.

The cracking of French prunes and of some other fruits as well seems to be owing to local conditions—

perhaps to the changing amount of atmospheric humidity prevailing. This is surmized because the cracking of some fruits is more common in localities somewhat open to coast influences, and is seldom found in some interior situations. There are some fruits or varieties of fruits which have the habit of cracking, no matter how they are grown. There seems to be no condition of culture or pruning which will affect the result. It is a serious trouble, and it is unfortunate that no prescription can be given to prevent it, in the present state of our knowledge.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending July 29, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Warm weather has continued through the week, and conditions have been favorable for all crops. Grain harvest is still in progress, though nearly completed in some sections. Wheat, barley and rye are of excellent quality, and the yield is considerably larger than that of last season. Corn and hops have made rapid growth during the week, having been greatly benefited by the warm weather; good crops are probable. Fruit picking, drying and canning are progressing rapidly, and heavy shipments to the East are being made. The yield of deciduous fruits is below average, but better than anticipated in some sections. Grapes are doing well. Oranges and olives are in good condition, and large crops are expected. Irrigation water is plentiful.

COAST AND BAY SECTIONS.

The weather has been favorable for all crops during the week. The days have been warm and pleasant and the nights foggy. Grain harvest is progressing, with excellent results in nearly all places, both as to yield and quality. Farmers in San Benito county are having difficulty in securing presses to bale the heavy crop of hay. Beans, hops, sugar beets and corn are making good growth, and large crops are expected. Fruit drying and canning are in progress. The yield is below average, but better in some places than estimated a few weeks ago, and the quality is generally excellent, especially in the foothill districts. Blackberries are abundant. Grapes are in good condition, but the yield will be light in many places. Citrus fruits continue thrifty.

SAN JOAQUIN VALLEY.

Clear and seasonable weather has prevailed during the past week, which was favorable for the ripening and harvesting of all crops. The grain harvest is progressing rapidly, and in some sections is about completed. Most of the grain is being stored in the warehouses. Deciduous fruits are ripening rapidly, and in most sections the crop is good and the quality excellent. Driers and canneries are in full operation. Peaches and melons are plentiful. Grapes are making good progress, but as yet the supply in market is light. In some sections the third crop of alfalfa is being cut, and is fully as good as the second crop. Stock of all kinds are in good condition and feed is plentiful. Water in the irrigating ditches is commencing to get low.

SOUTHERN CALIFORNIA.

Warm days and cool nights, with fogs along the coast, have been favorable for crops. Citrus fruits and walnuts are in excellent condition and will yield good crops. Apricots in the vicinity of Santa Paula are yielding better than expected. Beans are looking well, and will yield a fair crop in most sections, though probably less than average. The corn crop will be light. Wheat, barley, hay and potatoes are yielding much better crops than anticipated, and in some places the hay crop is nearly up to average. Irrigating water is falling off. Hay baling is progressing.

EUREKA SUMMARY.—Oat haying is nearly completed; yield and quality good. Grain harvest will soon begin. Apples are of good quality, but in some places only half a crop. Vegetables are suffering for moisture.

LOS ANGELES SUMMARY.—Nights cloudy with fog. Thundershowers in southern mountains. Early peaches are ripening. Lemons are being shipped in considerable quantities.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, July 31, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week...	Minimum Temperature for the Week...
Eureka.....	.02	.03	T	.09	60	48
Red Bluff.....	T	T	T	.03	108	66
Sacramento.....	T	T	T	.02	98	54
San Francisco.....	T	T	T	.02	68	48
Fresno.....	T	T	T	.01	108	68
Independence.....	.02	.02	.07	.02	100	62
San Luis Obispo.....	T	T	T	.01	84	50
Los Angeles.....	T	T	.02	.02	82	58
San Diego.....	.00	.00	.00	.01	72	64
Yuma.....	T	T	.02	.18	108	78



## HORTICULTURE.

### Pear Blight and Bees Again.

Our readers may like to keep up with the procession of discussion as to the relation of honey bees to the spread of pear blight, of which we have kept them informed during the last few weeks. The latest contribution is from the bee side, and in a letter written by Mr. Root, president of the National Bee Keeper's Association, to Gleanings in Bee Culture, Mr. Root alludes to the general facts with which our readers are familiar, and concludes as follows:

**WHY THE BEE MEN DECIDED TO MOVE OUT IN BLOOMING TIME.**—When both sides got together it was suggested by one of the fruit men that, as a compromise, the bees be moved from the vicinity of the pear trees during the time they were in bloom, and that, after they were out of bloom, and when the alfalfa began to yield nectar, they be returned to take the heavy or main crop. This, it was thought, would give the bee men time to investigate for themselves, and if, after investigation, it was shown that the claims of the fruit men were well grounded, afford in the meantime the necessary relief. This was finally agreed to, although it would entail a big expense on the bee men.

It may be wondered why the latter were willing to listen to a compromise at all. In the first place, they desired to be fair; and in the second place, the fruit men had the testimony of Prof. M. B. Waite, assistant chief of the Division of Vegetable Physiology and pathology at Washington, D. C. This official takes the position that bees do carry the microbes of pear blight from flower to flower while the trees are in bloom. In this opinion he appears to be supported by Prof. N. B. Pierce, Pathologist of the Pacific Coast Laboratory, Santa Ana, Cal.

**AN INTERVIEW WITH PROF. PIERCE.**—Prof. Pierce happened to be in the city at the time, and in an interview we had with him he seemed to be a competent scientist, and a fair-minded gentleman; but, unconsciously, he is prejudiced, I think, in favor of the pear men, with whom he has come much in contact of late. I asked him if it were not true that wild bees, insects and birds, over which man has no control, could do all the mischief ascribed to the bees. He admitted that this was possible but not probable. Did he not think that bees were valuable as fertilizers of the blossoms, especially of those of the Bartlett pear? He thought they were. Well, did not this service of the bee, year in and year out, more than counterbalance the alleged mischief done by them in the occasional year when pear blight was so prevalent? He could not say, although he was of the opinion that, by a certain alteration of varieties, the services of the bee might be dispensed with entirely; but of this was not sure.

From Prof. Waite's statement it would appear (to express it in common parlance) that the bees have been caught "red-handed," bearing the marks of the alleged criminal act. If I understood Prof. Pierce he had not found the bacteria of pear blight on the tongues of the bees, nor had he himself seen the microbes in the nectar. If this be true, we have, as the only real incriminating chain of evidence, the statement of Prof. Waite. Without detracting in the least from the skill of the professor, it is proper to remark that even the best of the scientific men make mistakes, and we, as bee keepers, cannot accept the unsupported statement of Prof. Waite without further investigation by some of our men equally competent and fair.

This is a nice question, as a lawyer would say, and we need to go at it carefully and candidly to get at the truth, cut where it may.

**WHAT THE BEES COULD NOT DO.**—There is some evidence that goes to show that Prof. Waite is mistaken. For instance, there are young pear trees, acres and acres of them, that have never been in bloom, and yet these young trees are blighted to death. How in the name of reason did the bees carry blight to these trees when it is apparent that they never went near them? And then there are little shoots that have pushed up from the ground since the big trees were in flower, and yet these shoots are blighted like the rest. Assuming, for argument's sake, that bees may carry the blight on old trees, we must admit that there is some agency, possibly the wind, Prof. Waite to the contrary, that carries the destructive microbe to the young shoots and the young trees. There are some things that are not explained yet.

Again, I believe we have the right to insist, for the present, until we have more corroborative evidence that wild bees, other insects and birds, over which man has no control, may be able to spread the blight just as much as the bees under the control of man. If this be true the removal of the bees controlled by man would not bring the relief expected, by a long way.

In conclusion, let me say that I visited the worst affected large pear orchards in the vicinity of Hanford, Cal. The large pear growers were fair, intelligent men. While they thought the bees were

to blame, they also thought the pear men had some responsibility in the matter. I visited one orchard of 120 acres, and every tree was badly blighted, and no mistake; but in this orchard we found the badly blighted little shoots I have referred to.

### Methods with Pear Blight.

Horticultural Commissioner C. S. Riley of Visalia gives the Delta his methods with pear blight.

Several remedies have been reported, but Mr. Riley is not prepared to say that any of them are effective, for in no instance has there been sufficient time to make a thorough test. He has experimented with several remedies of his own manufacture, but he has up to the present time found nothing so efficacious as the knife. The blight begins at the bud and works backward down the branch, and as soon as he discovers the presence of the disease he cuts off the branch at the first joint below. The trees that he has gone over twice seem to be thriving and show no further symptoms of the scourge. This is an expensive proceeding, but he believes it to be absolutely necessary until a cure is discovered, if the trees are to be preserved from destruction. There is no room for hope that a tree burned by the blight will ever recover, for it is as dead as though a fire had swept over it, and presents much the same appearance.

There is one thing that Mr. Riley is careful to impress upon those whom he advises to use the knife, and that is that all implements must be disinfected after each cutting. A healthy limb will be inoculated if a knife or saw is used upon it after having been used upon a diseased limb. He carries with him a bucket filled with twenty parts water and one part carbolic acid in which he dips the knife or shears as soon as he has removed a limb. In the case of a saw, before bathing it in the solution, he removes with a handful of paper all the sawdust from between the teeth.

The blight is somewhat eccentric in its actions. It will sweep through an orchard, leaving behind a scene of desolation, and yet there will frequently be found in the midst of the dead trees a few that have escaped unscathed.

**COPPERAS SUGGESTED.**—A friend of the Tulare Register has ransacked his memory for this incident which may aid those orchardists whose trees are suffering from the dreaded pear blight. A neighbor of his was coloring carpet rags with a solution of copperas; when through, he poured the remaining dye stuff about the roots of an old pear tree that was far gone with the blight, and in a little while was astonished to find the tree putting out new shoots and recovering from the disease. Taking the hint, he made more of the solution and poured it about the roots of his younger trees that were affected, with the result that the blight ceased bothering them. An Eastern fruit journal reports also that the use of a solution of copperas as a spray stops the blight. Here is another suggestion: Bore a small hole into the trunk of an affected pear tree, boring downward, and pour a solution of copperas into the hole, then plug it up and see what the result will be. It can not more than kill the tree, which the blight will do anyway, and the copperas may go through the same and kill the disease.

### About Lemon Houses.

In the first place, says a writer in the Los Angeles Times, every lemon grower who is in the business to an appreciable extent should have his own storage house. As to packing lemons for the market, that can be done cheaper and better from a central point, large enough to justify the employment of the very best skill. Spring wagons are coming into general use, and the lemons can be delivered to the central house in fine condition if properly handled at the storage house. Granted that each grower should have his own house, he evidently cannot increase the beauty of it by building the lower story into the ground. I do not see why he should not have a basement, however, if he wants it, and keeps it closed all the time.

The essentials of a good lemon house are evenness of temperature, dryness and ventilation, with an outside corridor for storing the fresh fruit in as near a cool, open-air condition as possible. With lumber, building paper, sawdust walls, or any form of wood-work that may preserve a proper temperature and exclusion from light, there seems to be no reason to go underground for storage. If the builder has a few live oak or tall eucalyptus which allow perfect circulation, under which to construct his house, he might spare some expense in extra wall work. Of course, the skyward outlook should be free and the upper ventilators always in order. Plenty of hall-ways that can be given free air, the doors for the inside room tight-fitting, movable ventilators in the roof, good walls, the house built near the ground—these suggestions might also be beneficial.

When the transportation companies shall give the lemon men a low winter freight rate the question of storage will not be so important, but that would not obviate the necessity of a good storage house for the November and December pick. I believe the wooden, one-floored lemon house is the proper thing, although

many claim that they get all the essentials by the use of cement. There is usually enough moisture in curing lemons, however, to give them the proper conditions if the hot, desiccating air can be shut out. The wooden house may need more opening and closing than the other to maintain the proper temperature, but it seems to be in general favor.

## THE VINEYARD.

### Phylloxera Investigations in the San Joaquin Valley.

The journals of the valley are properly paying much attention to the exploration and experiments which the University has in progress to assist the local authorities in defining the phylloxerated district and in making experiments in slaying the insect. The Fresno Republican says that Mr. Twight of the University Experiment Station is making investigations in that district to ascertain how rapidly it is likely to spread in future and the best methods of meeting the condition. The question of the slow or rapid spread depends almost entirely on the presence of the winged form of the insect. If that is here, it will be but a short time until every part of the valley is taken. If there is no winged form, the only way for the disease to advance over the country is to go through and upon the ground from vine to vine, or by means of cuttings carried from one place to another. This is, of course, a very slow process, one that may be arrested, and in such case it will be years before the whole of the grape growing region is overwhelmed.

With the co-operation of a number of the principal vineyardists, Mr. Twight will lay out the experiments to test the adaptability of resistant vines. It is desired to get a location in each of the variety of the soils—the sandy, white ash, heavy red and adobe. The University will furnish about fifty resistant cuttings for each place. The vineyard managers, said Mr. Twight, were very willing to co-operate with the department in this undertaking. A few of the large vineyards have already a number of resistant cuttings of one kind or another on hand, but there has been, of course, no comparative studies of the varieties.

Experiments are to be made with regard to a number of methods of destroying the insects of the present vines. One method is by flooding, and the other by the use of carbon bisulphide. The latter liquid is injected into the ground about the vines, and the fumes are supposed to kill the vermin. The claims in favor of flooding have been widely discussed. The results will be carefully examined, but all these plans are regarded at best as but temporary relief. It is said that some experiments in the use of bisulphide have already been made at the St. George vineyard.

As to finding the winged variety of the insect, Mr. Twight said he was going to set traps for them. The phylloxera is very small, so small as to make it hard to find them with the naked eye. All that have been discovered in this country were confined to the roots of the vines. To trap the winged specimens a vine will be covered with a network of gauze, and within this will be some sheets of glue or paste. These will be examined from day to day to see if any insects have been caught.

**HANFORD DESIRES TO PARTICIPATE.**—A. F. Jewett writes to the Hanford Journal claiming that an expert should be sent to that county. He puts his claim in this way:

I cannot understand why one of these experts has not as yet been sent to examine the vineyards of Kings county to ascertain if phylloxera is, or is not, prevalent here, unless it be that persons interested in the sale of vineyard lands here are more interested in having such experts remain outside of this county than to come inside of it. I have spoken personally to three of our Supervisors and to one of our Horticultural Commissioners upon the necessity of having experts sent here, and all of them appear as dormant as mudsills upon the subject.

I remember when, in 1892, I told the PACIFIC RURAL PRESS that the raisin crop here had been seriously cut off by frost, certain land speculators who had been telling Eastern people that we never had frost here, were mad enough to hang me; but when fall came it was fully demonstrated that I had been right.

In matters of this kind neither a hush nor a scare policy is in the interests of the public good. To avoid either extreme investigation is the only practical method.

If I have phylloxera in any of my vineyards I want to know it, and I want all of my neighbors to know it, so that we may prepare for the emergency that is sure to come. While if, after a thorough examination by a competent expert, we are assured that we have not this dread disease as yet in this county, every property owner and resident laborer in the county will experience a feeling of relief. There is a small spot in one of my vineyards, near the center, which looks very much as if effected with phylloxera, and I am told that there are many other Kings county vineyards, near the center of which are like



suspicious spots. These spots are all reported to be small, but the phylloxera fly travels great distances, and a swarm coming this way would probably divide up into small squads before reaching this county.

Now, as a vineyardist and a taxpayer, I insist that a competent expert be sent to examine the vineyards of this county, as soon as it can be arranged. We may as well face the music now as later on, for we will have it to do and the sooner we prepare for it the better it will be for us. It is folly to say that this dread vine disease will not come to this county, for it certainly will, if indeed it is not already here. It is known beyond doubt to be 30 miles away, and it is only a question of a few years when every grape vine in this valley will be wiped out. That is the history of the disease everywhere it has been known, in both this country and in Europe.

It is also folly to say that the phylloxera fly will not live in this or that character of soil. This fly is the natural enemy of the vine, and it is safe to presume that it will thrive wherever the vine will grow.

Now what I propose is: That the progress of this disease be closely followed by the best trained experts and that we prepare to meet it with resistant stock. If our nurserymen know just what progress the disease is making, they will know when and in what quantities to grow and graft this stock so as to be able to meet the demand for it. It would be a mistake to plant anything but resistant roots now. In my judgment, twenty years hence the vineyard interests of this valley will be on a far better footing than they are now. Vineyardists have now learned by practical experience the character of soil best adapted to the growth of the vines. Nearly one-half of the vineyards of this valley are planted upon soil illy adapted to the business.

Soil too weak to grow good wheat is not strong enough to grow grapes with profit. Soil upon which grapes will not ripen sufficiently to make good raisins by September 5th, in an average season, is too damp and heavy for grapes and had far better be planted to other fruit, or to alfalfa.

I predict for both the raisins and the wine business, in this valley, a bright future, but the only road to success hereafter lies through the resistant vine.

#### Vine Planting in Sutter County.

The Yuba City Farmer says that it is claimed that there is very little land in the eastern half of Sutter county on which vines will not grow luxuriantly without irrigation. This has been practically demonstrated in a number of instances and large returns have been realized, and this very fact that little or no irrigation is required for raising wine grapes makes it of special value to the ranchers who are not fixed for any crop which needs irrigation. To show that the people are in earnest concerning this industry, the Farmer prints the names and number of acres promised for vine planting: J. C. Gray 100, Thomas Holmes 40, G. L. Jones 30, G. E. Wapple 30, C. B. O'Banion 40, Heiter Blevin 100, Mrs. Ida F. Lee 50, E. W. Hixson 10, Mark Pease 30, Lloyd H. Wilbur 40.

### FRUIT MARKETING.

#### What the Prune People Are Doing.

The San Jose Mercury says that the contract for the packing house to be erected by the Cured Fruit Association has been let. This structure will be built in Santa Clara. The town not only gives the Association a twenty years' lease of the lot on which it is to be built, free of cost, but it also exempts the structure from all city taxation and furnishes water free.

The building will be 80 feet wide by 300 feet long and three stories high. It will be fitted with bins and new ways of the most approved plans, and will furnish storage capacity for 18,000,000 pounds of prunes and complete equipment for grading, processing and packing.

WHAT IT MEANS.—The building of this warehouse is taken to mean that the Cured Fruit Association intends to be absolutely independent of the packers in case such occasion arises or it seems prudent and legal. When President Woods of the Cured Fruit Association was recently interviewed in regard to the matter he simply had to say that the directors had determined to build the warehouse, that the contract had been put on file, and that it spoke for itself. There can be no doubt but that it is in accord with the policy announced at the last annual meeting of the Association when Judge Bond, who was then president, held that the growers should pursue a policy that would make them absolutely independent. It is understood the directors feel that the Association must be in a position to take care of itself if it does not want to be at the mercy of the Packers' Co., and that the expenditure of the sum necessary to build this packing house will be more than saved in the price received for prunes because of this independence, even should events not turn so that it would be necessary to do the packing, and if

the Association does its own packing the charges saved would be enough to pay for the packing house twice over.

PRUNE PRICES WITHDRAWN.—At a meeting of the executive committee of the Cured Fruit Association a resolution was adopted rescinding the price fixed on prunes. This price was a 3-cent basis. The action of the executive committee of the board means that the fruit is not on the market—that is, it is not seeking a sale. Persons wishing to buy prunes must now seek the Association and negotiate with it for such fruit as desired. It is plain that this says that prunes are good property and worth holding for possibly better prices than a 3-cent basis. Recent sales have been unusual for so early in the season, and all reports coming in tell of a shortage of fruits in the East. It is evident that the action of the board is taken because of general conditions in the East.

PRUNES CRACKING.—Reports from various sections of the valley tell of prunes splitting wide open as they approach maturity. A grower living in the hills took to Manager Graham of the Flickinger cannery a twig 18 inches long. On this were twenty-five magnificent prunes, and not a sound prune in the lot. Each was split open, the pit is exposed, and the fruit worthless. Milpitas hills are not the only section of the valley where this trouble exists, for similar reports come from all parts.

PRUNES AND APRICOTS AT CAMPBELL.—The apricot harvest continues to keep the fruit growers of the Campbell section busy. The cannery has been running at good speed during the week, and the various driers are turning out a fair amount of choice dried golden fruit. The supply of apricots at the cannery will soon be exhausted, however, but the company expects to make its best and longest run on pears and cling peaches. Agents of the California Cured Fruit Association are in the field, estimating the amount of the growing prune crop, and buyers of green prunes are also quite active, canvassing the market and buying whenever they can get it at their figures. Prices have been quoted at from \$20 to \$23 per ton for ordinary prunes, but the growers are holding out for \$25 per ton for good prunes. The fruit buyer also seems to look with considerable longing on the dried apricots, which is one of the most attractive cured fruits in the market. In a short time offers will be made on this fruit, and from all indications it will command a good price. Apricot pits seem to be in great demand this year, \$13 per ton being offered, while last season \$10 was about the ruling price.

### THE DAIRY.

#### Advantages of Thoroughbred or High-Grade Cows for the Dairy.

By GUY H. MILLER, at the recent meeting of the Southern California Dairymen's Association.

There are at least three advantages that the thoroughbred, or high-grade, has over the scrub, or low-grade:

First.—The advantage of a higher market value a well-appearing cow that shows good breeding has over a coarse, scrubby-looking cow. It is easier to sell a cow that shows the type of some of the dairy breeds than it is to sell a cow that shows plainly that she is a mongrel—and nearly every dairyman offers a cow for sale once in a while.

Second.—Breeders whose heifers are expected to keep up the herd, or to increase it, or to grow into cows to sell as family cows, know that the well-bred cow has the advantage of a strong race inheritance from a line of ancestors that have been bred for a special purpose. She is bred with a special end in view; bred to produce milk and butter. It costs no more to raise heifers from high-bred cows that make fine yearly records than it does to raise the heifers of cows that are scrubs and only make 200 pounds of butter a year. And you can easily expect a herd of heifers to make cows that will average as high as their dams, provided they are sired by a bull that is of as high class as the dams.

Sandy Larkins, in his book, "Dairy Fortunes," gives figures to prove that if a cow that produces 350 pounds of butter per year is worth \$40, a cow that will produce 450 pounds of butter is worth \$86.66. That is a difference that is worth having. That difference represents only the difference in dairy products, to say nothing of the extra value of the 450-pound cow as a breeder. These cows can be raised at the same price each.

The third advantage of well-bred cows is their greater production. To show that the highly-bred cow is a greater producer, I will quote some yearly herd records. To judge any class of cattle intelligently you must resort to some method of comparison. It is said comparisons are odious, and I have no doubt they are to the scrub cow. But we have to make comparisons to obtain knowledge. I would like to call your attention to the following yearly reports of the work of herds in several different sections:

A CONTRAST.—First, I have a record of the yearly

work of the Utah Experiment Station herd. This is taken from Bulletin No. 43 of that station. This herd consisted of common cows, selected from the herds of farmers in that section. The manner of selection was to visit the different herds in the section, look the cows over, and select a few to test by the Babcock machine. More than 250 cows were inspected, and 75 of this number were selected for test. So, you see, there were 175 cows that they knew they did not want without going to the trouble of testing. Of the seventy-five cows whose milk was weighed and tested, eleven were selected for purchase. We can be sure that these eleven cows were the aristocracy of this particular breed—the "common cow." The station had originally three cows—one pure-bred Jersey and two common cows—making fourteen cows in the herd. The milk of each cow was weighed every milking and tested regularly. The yearly report shows an average of 5655 pounds of milk and 268 pounds of butter per cow. The highest butter yield was 364.64 pounds; this was made by the pure-bred Jersey, who gave 6801 pounds of milk. The highest milk yield was 7156 pounds by a common cow. She was farrow the first six months and milked the full 365 days. The Jersey cow made the most butter and made it at the least cost per pound. These cows were well fed and well cared for.

Here is another report from an experiment station. This is from a bulletin of the Kansas Station, and is a report of the yearly work of the station's scrub herd. This is a herd of twelve cows, bought in the surrounding country expressly for this experiment. The object was to test the value of this class of cows for dairy purposes. This herd gave an average of 5707 pounds of milk, making an average of 277.7 pounds of butter per cow. The highest butter yield was 447.6 pounds from 9116 pounds of milk. And, just as was shown in the Utah herd, the cow that made the most butter made it at the least cost per pound. This cow was No. 20 of this herd, who made 447.6 pounds of butter; she is the best common cow that I have ever heard of. She made better than eighty pounds more butter than any other cow in the herd. She made a net profit of \$40; average net profit of the herd was \$16.25 per cow. They lost 43 cents on one cow. The cows were fed a balanced ration and were well cared for.

I also have a report from the Wisconsin Station. This bulletin is a report of the yearly work of four different herds, owned by farmers in the vicinity of the station. Milking and weighing of the milk of each cow was done by the owner, and the testing by the station officers. The herds were designated A, B, C and D. In herd A there were twelve cows. The average made by this herd was 4820 pounds of milk, 229 pounds of butter. In herd B there were only five cows. They made an average of 6383 pounds of milk, 319 pounds butter. In herd C twelve cows, that made an average of 6056 pounds of milk, 315 pounds of butter. In herd D there were only four cows. They made an average of 5788 pounds of milk, 292 pounds of butter. Combining the four herds, we have an average of 5623 pounds of milk and 281 pounds of butter per cow for the thirty-three cows. Each farmer fed the individual cows of his herd the same ration; so, of course, the cow that made the most butter made it at the least cost per pound. These cows are represented as being fair samples of the common cows of that section.

In the three bulletins quoted we have three different sections represented—Utah, Kansas and Wisconsin. If we take an average of these three reports, we should get a fair idea of what the best class of common cows can do. We find that the fifty-nine cows reported in these tests made an average of 5647 pounds of milk and 277 pounds of butter per cow.

THOROUGHbred RECORDS.—Now I will quote a few yearly records of high-grade and thoroughbred herds:

Here is a report of the yearly work of a herd of pure-bred Guernseys. There were ten cows in this herd, four of them were ten years of age and another fifteen years of age, who gave milk from two teats only, and is kept now solely as a breeder. The ten cows made an average of 6347 pounds of milk and 350.77 pounds of butter—an advantage over the scrubs of 73 pounds of butter and 700 pounds of milk.

Here is a record of a herd of grade Jerseys down in Tennessee: Sixteen cows in the herd, who made an average of 5336 pounds of milk and 350 pounds of butter. This is a herd of rich cows; they did not give quite as much milk as the scrubs, but made 73 pounds more butter per cow. This is the lowest record I have seen for high grades, where all the milk and butter were taken into account and where the cows were well cared for and well fed, like the scrubs whose tests are reported above.

Now we have a report of a western Kansas herd of grade Holsteins. The grades are half bloods and higher. The dairyman tried a herd of scrub cows first, but could not make it go. So he graded up his herd by using pure-bred sires, and this is the report for last year. Several heifers are included in the herd. The average milk yield was 8263 pounds of butter and 360.75 pounds per cow. This is a gain over the scrubs of 2616 pounds of milk and 90.75 pounds of butter.

Here is a report of a small herd of Jerseys owned by a woman up in northern Vermont. This is a herd of ten cows. They made 404½ pounds of butter per



cow. The yearly milk yield is not given, nor the milk and cream used by the family is not taken into account in the report of butter yield. This herd is registered stock and belongs to Mrs. Agnes Cook of West Glover, Vt. She and her three small boys do the work. This herd is all descended from one cow, the oldest being eight years old. Here is an example of the wisdom of having a good, pure-bred foundation to breed a herd from.

**THE WRITER'S HERD.**—Now I wish to report the work of my own herd for the year ending Sept. 1, 1899: This herd made an average of 6428 pounds of milk and 413.75 pounds of butter. There were eight head in the herd, the oldest being six years old and the others four years and under. The highest milk yield was 7977½ pounds of milk, made by Elaine C., who made 497.72 pounds butter, age four years.

The highest butter yield was made by Nettie Underwood, 511.86 pounds from 7593½ pounds of milk, age four years. The cow that made the most butter made it at the least cost per pound. Two of this herd made over 500 pounds of butter this year.

For the year ending Sept. 1, 1900, this herd made an average of 6644 pounds of milk and 425.88 pounds of butter per cow. This is an advantage of 997 pounds of milk and 148 pounds of butter per cow over the average made by the common cows. There were three cows in the Vendera herd this year that made over 500 pounds of butter, and, as before, the cow that made the most butter made it at the least cost per pound. The Vendera herd is a herd of registered Jerseys.

Now I wish to give the report of one more herd. This is a herd of registered Jerseys owned by F. H. Scribner, Rosedale, Wis. There were twenty-two cows in the herd, and all ages represented. They for the year 1900 averaged 6991 pounds of milk, making 449 pounds of butter per cow. This beats the scrub average—1344 pounds of milk and 172 pounds of butter; the difference, 172 pounds of butter, is more butter than some cows can make in a year. One of the cows in the Kansas herd only made 158 pounds. The cow that gave the most milk in this herd is Ida of Glendale. She gave 13,474 pounds of milk and made 740 pounds of butter.

According to Sandy Larkin, if a 350-pound cow is worth \$40, a cow that will make 750 pounds is worth \$825. It did not cost any more to raise Ida of Glendale than to raise a heifer from the cow at the Kansas Station that made 158 pounds of butter. A heifer calf from Ida of Glendale is worth more than twenty or thirty heifer calves from the Kansas scrub.

There are many fine herds of pure-bred dairy cattle that make just as good records as Mr. Scribner's, and there are cows that can make more butter than Ida of Glendale. But it is not the object of this paper to point out the work of individual cows with high records. It has been the aim to show the great difference between the yearly records of the best common or scrub cows of no breeding and the records made by high-grade and pure-bred cows of recognized dairy breeds.

**HOW TO GET BETTER COWS.**—I think enough samples have been cited to show that the way to attain the highest success in dairying is to obtain the best blood you can afford to start with and then grade up. Grade up is the keynote to success in any line of production. It is just as easy to raise a herd of cows that will make more than 277 pounds of butter as to raise a herd that will make less. Every dairyman can start on this road if he only thinks so. If you can not buy high-bred cows to start with, buy the best you can. Then get a pure-bred bull of some of the dairy breeds; get a bull from a cow that has made a creditable record; then use him to grade up your herd. If you can not buy a bull, then buy a bull calf; he will be a bull next year. Do not breed to a grade sire, no matter how much he looks like a thoroughbred. A grade has not that race impressiveness that a pure-bred has. The well known dairy breeds have been bred for the special purpose of dairy work for more than 100 years, and you want to get the benefit of what these former breeders have done in the way of improving dairy cattle. And after you have started to breed up, do not forget to feed up, and in a few years you will produce a herd of cattle that will be a source of profit and a credit to yourself and to the dairy interests of your section.

#### Mr. Burgess Adds to His Milk Fever Essay.

To THE EDITOR:—In your issue of July 27th I notice what I had to say at the Southern California Dairy-men's Association at Los Angeles, Cal., recently. I did not intend it for publication and wish to add something to it to make it more valuable to my brother dairymen.

I do advise giving hypodermically the dose of strychnine and digitalin. As I stated in my essay the dose indicated is a maximum dose, and only in extreme cases should it be used. I would recommend for the novice the use of say one-half grain strychnine, one-twentieth grain digitalin, following up as directed and as the patient's condition required. I have never lost a case with this treatment.

Since the meeting of the Southern California Dairy-

men's Association recently, I have cured the worst case of milk fever I ever witnessed. This cow dropped her calf in the middle of the afternoon. I was called at 3 o'clock A. M. next morning. This cow had been milked out repeatedly the day before calving, and also she claimed another cow's calf and allowed this calf to suck her, so if there is anything in "there being germs in the udder," and that calf sucking before calving, and milking, this disproves that theory. Also this cow did retain the placenta, something I had never seen before and of very rare occurrence. In fact I had always felt quite safe when an extra good cow retains the afterbirth. I always do, however, remove it if it does not come away in twenty-four hours.

The greatest caution should be observed to have everything absolutely clean and disinfected—hands and instruments used, everything—you cannot be too careful. Remember also that it is very important to get the medicine to work as speedily as possible, so do not waste any time.

I might perhaps give the early symptoms of milk fever: The cow is usually taken down in from ten to forty-eight hours after calving, rarely after the sixth day. All signs are gradual: as the disease increases symptoms will be more marked and can be observed by any one. The cow calves satisfactorily and appears perfectly at ease and comfortable, but within a certain time signs of disturbance are evident to the intelligent observer, the appetite, at first normal, has declined or may be absent. The animal appears dull and does not chew her cud. She is restless, constantly moving her hind feet, the milk secretions rapidly decrease and finally cease altogether. The mouth is hot and dry, the mucus membrane is reddened, horns and ears are hot if the temperature is up above normal and cold if it is below. Respiration increases in frequency, but the motion is not deep or vigorous, the breath is short and the animal appears anxious to avoid pain in the act of breathing.

Another phase of the malady now appears. Pain is evident internally, as the animal grinds her teeth, looks at her flank, throws her head to her side, draws up her hind feet toward abdomen and almost immediately afterward shoots them out again very quickly. She soon will become unconscious and the white of the eye a dull leaden color. It is folly to attempt to give medicine by the mouth, as it is very likely to go the wrong way, into the lungs, causing pneumonia. If nothing is done the animal will not live twenty-four hours after being taken down. Better than any cure is how to prevent it. I may try and tell how this may be done in some future letter.

**THE GOOD COWS ARE ATTACKED.**—Any cow I have known that has taken milk fever has produced two pounds butter fat per day or has been capable of producing this quantity; also cows susceptible to milk fever are cows giving from thirty-five pounds up to sixty pounds of milk daily, testing from 4% to 6% butter fat. These are cows that are fed well, and come fresh in fine, sleek order. I have never known cows that have to be "tailed up" to have milk fever, nor three-gallon cows; only the very best and greatest producers are subjects.

C. D. BURGESS.

Arlington Station, Riverside, Cal.

It is very kind of Mr. Burgess to give us this postscript to his excellent essay. We shall be glad to hear about prevention.

## THE POULTRY YARD.

### About Eggs.

From a recent Farmers' Bulletin of the Department of Agriculture.

Different methods of evaporating or desiccating eggs have been proposed, and several products which claim to be prepared in this way are now on the market. It is said that the egg is dried in or out of a vacuum, usually by a gentle heat or by currents of air. When placed on the market the dried egg is usually ground. Sometimes salt, sugar, or both, have been used as preservatives. Such material is merely egg from which the bulk of the water has been removed. If the process of manufacture is such that the resulting product is palatable and keeps well, the value of evaporated eggs under many circumstances is evident.

This material is used by bakers to some extent as being cheaper when fresh eggs are high in price. It is also used in provisioning camps and expeditions, since desiccated foods have the advantage of a higher nutritive value in proportion to their bulk than the same materials when fresh. Fresh eggs contain about 25% of dry matter. If all the water is removed in preparing evaporated eggs, one pound will furnish nutritive material equivalent to about four pounds of fresh eggs. One of the commercial products recently tested appeared to be dried egg coarsely ground. For use it was thoroughly mixed with a small quantity of water. The mixture could then be fried or made into an omelet, etc., and was found to be very palatable, closely resembling in taste the same dishes made from fresh eggs.

**SUBSTITUTES FOR EGGS.**—An egg substitute has

been manufactured from skim milk. It is said to contain the casein and albumen of the milk mixed with a little flour, and is put up in the form of a paste or powder. Such material is evidently rich in protein, and, according to reports apparently reliable, is used in considerable quantities by bakers and confectioners in place of fresh eggs.

Egg substitutes have been devised which consist of mixtures of animal or vegetable fats, albumen, starch or flour, coloring matter, and some leavening powder in addition to the mineral matters similar to those found in the egg. Such products are designed to resemble eggs in composition.

Other egg substitutes have been marketed which contain little or no albumen, but apparently consist quite largely of starch, colored more or less with some yellow substance. These goods are specially recommended for making custards and puddings similar in appearance to those in which fresh eggs are used. There is no reason to suppose that such products cannot be made so that they will be perfectly wholesome. The fact must not be overlooked that in the diet they cannot replace fresh eggs, since they do not contain much nitrogenous matter or fat. As recently pointed out in one of the medical journals, this may be an important matter if such an egg substitute is used in the diet of invalids, especially if the composition of the egg substitute is not known, and it is employed with the belief that, like eggs, it contains an abundance of protein.

**POSSIBLE DANGER FROM EATING EGGS.**—Occasionally a person is found who is habitually made ill by eating eggs, just as there are those who cannot eat strawberries or other foods without distress. Such cases are due to some personal idiosyncrasy, showing that in reality "one man's meat is another man's poison." A satisfactory explanation of such idiosyncrasy seems to be lacking.

Overindulgence in eggs, as is the case with other foods, may induce indigestion or other bad effects. Furthermore, under certain conditions, eggs may be the cause of illness by communicating some bacterial disease or some parasite. It is possible for an egg to become infected with micro-organisms, either before it is laid or after. The shell is porous, and offers no greater resistance to micro-organisms which cause disease than it does to those which cause the egg to spoil or rot. When the infected egg is eaten raw, the micro-organisms, if present, are communicated to man and may cause disease. If an egg remains in a dirty nest, defiled with the micro-organisms which cause typhoid fever, carried there on the hen's feet or feathers, it is not strange if some of these bacteria occasionally penetrate the shell, and the egg thus becomes a possible source of infection. Perhaps one of the most common troubles due to bacterial infection of eggs is the more or less serious illness sometimes caused by eating those which are "stale." This often resembles ptomaine poisoning, which is caused, not by micro-organisms themselves, but by the poisonous products which they elaborate from materials on which they grow.

Occasionally the eggs of worms, etc., have been found inside hens' eggs, as indeed have grains, seeds, etc. Such bodies were doubtless accidentally occluded while the white and shell were being added to the yolk in the egg gland of the fowl.

Judged by the comparatively small number of cases of infection or poisoning, due to eggs, reported in medical literature, the danger of disease from this source is not very great. However, in view of its possibility, it is best to keep eggs as clean as possible and thus endeavor to prevent infection. Clean poultry houses, poultry runs and nests are important, and eggs should always be stored and marketed under sanitary conditions. The subject of handling food in a cleanly manner is too seldom thought of, and what is said of eggs in this connection applies to many other foods with even more force.

**ORIENTAL METHODS.**—In the East Indian Archipelago salted ducks' eggs are an article of diet. The new-laid eggs are packed for two or three weeks in a mixture of clay, brick dust and salt. They are eaten hard-boiled. It is said that in this region and in India turtle eggs are also preserved in salt. These products, while unusual, do not necessarily suggest an unpleasant article of diet. The same can hardly be said of a Chinese product which has often been described. Ducks' eggs are buried in the ground for ten or twelve months and undergo a peculiar fermentation. The hydrogen sulphide formed breaks the shell and escapes while the egg becomes hard in texture. It is said that the final product does not possess a disagreeable odor or taste. Eggs treated in this or some similar way are on sale in the Chinese quarter of San Francisco, and very likely in other American cities. A sample recently examined had the appearance of an egg covered with dark-colored clay or mud.

The maximum velocity of the water column in the drive pipe of a hydraulic ram rarely gets over 3.6 feet per second. In certain modifications of the hydraulic ram employed in air compression velocities up to 7.5 feet have been obtained in practice. There is with these higher velocities a positive gain in economy, but no higher rate of efficiency.

AN automobile has been successfully employed on mountain roads in California.



## Agricultural Review.

### ALAMEDA.

**THE APRICOT CROP.**—Niles Herald, July 26: The first shipment of apricots from Niles this season was made July 2, and consisted of two boxes by Joe Tyson and one by Mrs. Pickering. Since that date the shipments have steadily and rapidly increased until Tuesday, when seven carloads were sent from this station. The total amount shipped to date will aggregate about 1,000,000 pounds.

**GOOD CROPS.**—LIVERMORE, July 24: Both hay and grain appear to be yielding fully up to expectations. Some of the first hay cut was damaged by the rain to such an extent as to make it unsalable, but the farmers say that beyond a bad color it was not harmed and will be good enough for home feeding. The hay is said to be heavier than usual, and all that was cut late is of excellent quality. Although the usual number of presses are in the field farmers are complaining, as there is so much work on hand that it will be late in the fall before all the baling is done with the present facilities. Contrary to expectations, the price promises to be fair. Several sales were made this week at \$9 a ton delivered. Wheat and barley are both turning out well and the four threshers now at work in the valley will be kept busy for many weeks to come before the crop is all in the sack.

### BUTTE.

According to the assessor, Butte county has the following fruit trees: Apple, 8175; apricot, 14,420; cherry, 9600; fig, 9320; olive, 71,000 bearing and 32,000 non-bearing; peach, 125,000; pear, 20,425; prune, 83,315; lemon, 1220; orange, 307,800 bearing and 20,090 non-bearing; almond, 25,375; walnut, 965.

### NEVADA.

**IMMENSE LOSS BY FOREST FIRE.**—Grass Valley, July 28.—This afternoon the forest fires in Indian Springs and Spenceville districts broke out with renewed fury, the flames sweeping over vast areas of forest and brush and leaving a trail of disaster behind. The renewal of the fire alarmed the neighborhood and a large force of men went to the scene, fighting the flames. On the Webber ranch everything except the house has been burned. The flames came with such a rush that before the men could get to the barn the structure caught, burning two horses with it. Edward Brown Mills has been burned over, destroying a large amount of pasturage, hay, fence, buildings and other property.

### LOS ANGELES.

**GOOD PRICES FOR GRAPES.**—Pasadena Star, July 24: The grape growers of the San Gabriel valley are jubilant, for they have been offered and have accepted \$25 per ton for the new crop of wine grapes. The offer was made yesterday to the growers, as an association, by President H. J. Wallcott, who had called a special meeting for the purpose. The meeting was attended by representatives from every section between Sierra Madre and Pasadena to Cucamonga, and also from the San Fernando, Artesia and Norwalk sections. Mr. Wallcott's offer, which he said came from New York purchasers, was quickly accepted by unanimous vote, thus shutting out entirely the southern California wine men, who have for years handled the local crop, nearly always upon their own terms. The wine men's offer this year was \$18 a ton. The New Yorkers are to take 2500 tons at the \$25 figure, leaving a balance of about 1000 tons to be disposed of later. The vines were reported to be in excellent condition everywhere and a bountiful crop is assured. The highest price paid for twenty years past in this section for wine grapes was \$16.50 per ton.

### MENDOCINO.

**THRESHING MACHINE BOILER EXPLODES AND KILLS TWO MEN.**—A Santa Rosa dispatch, under date of July 27, stated that Anderson valley, near Boonville, was in flames, as a result of a threshing machine explosion, in which two men lost their lives. The victims are William Rose and David Lear. The former was the proprietor of the threshing outfit, which was at work on John Smalley's ranch. He was superintending the running of the engine when the explosion occurred, and it is thought that ignorance of the apparatus on his part was the cause of the tragedy. He allowed the water in the boilers to become low. When the explosion occurred Lear was at work on top of the machine "feeding" grain. He was struck by a portion of the boiler, which was blown entirely over the separator. The stack at which the thresher was working took fire and the flames rapidly spread, burning all the barns and buildings on the place. The Smalley residence

and live stock were saved with difficulty. From this ranch the fire was communicated to adjoining property, and hundreds of acres of standing grain were burned over.

### MERCED.

**DAMAGING GRAIN FIRE.**—Merced County Sun: Sunday afternoon a fire was discovered on the Pat Reilly ranch, about 4 miles southwest of Merced. After burning some fencing, about twenty tons of hay, considerable stubble and some grazing on the Chamberlain ranch, further spread was stopped in that direction. Mike Rahilly lost 250 tons of hay in stack and some 200 acres of standing grain, partly covered by insurance. The fire spread in the Tetzlaff brothers' stubble. In the center of the tract stood about 100 acres of wheat, and alongside of it a combined harvester. The Tetzlaffs barely had time to gather their stock from the pasture and haul the harvester on to some summer-fallowed land, when the fire struck the standing wheat. From this it spread along the stubble into a pile of some 2000 sacks of wheat, which was saved with but little damage. Altogether it is the most extensive grain fire that we have experienced in this vicinity this season. The total loss will reach fully \$5000.

### SAN BERNARDINO.

**FINE SPECIMEN OF FERN LIFE.**—San Bernardino Sun: One of the most beautiful specimens of plant life growing in this section of the country is the immense fern just inside the big plate glass window at Barton & Catick's. The plant is of the asparagus sprengeri variety, and is perhaps the largest of its kind in existence. Fronds measuring the enormous length of 12 feet 6 inches have been cut from the plant, all of which sprung from the three puny fronds measuring less than 3 inches in length. The plant blossoms three times during the year and is now in full bloom. The odor given off is extremely pleasing to the smell, having a peculiar flavor, which seems for all the world like freshly picked peaches.

**LEMON GROWERS, NOTICE.**—Ontario Record-Observer, July 26. A meeting of all the members of the Upland, Citrus Fruit and Cucamonga Association, Ontario, and Lemon Growers' Exchange is called for Saturday, Aug. 3, at 2:30 P. M., at the Exchange building at North Ontario, to discuss the question of proper protection of lemon and orange trees against possible damage by frost, and to organize to this end.

### SAN JOAQUIN.

**IMPORTING ALFALFA HAY.**—Stockton Mail: It is probably not generally known that the hay dealers of Stockton have been importing alfalfa hay from Kings county. Nevertheless that is the case, and they are retailing it by the bale for 1/2 cent per pound, the price of the best grain hay.

### SANTA CLARA.

**PRUNES SELLING AT FULL PRICES.**—San Jose Mercury, July 26: The outlook for the Santa Clara county fruit grower is decidedly more favorable than for some time. In fact, for the prune grower it may be said that the present outlook is more encouraging than for two years. The improved prospects are due to several causes. Among them is the great drought in the Middle West and another is the short crop in this State. Mr. Crandall yesterday sold eight carloads of prunes. It is not stated what the destination of the cars is; but as the first car goes to Iowa, it seems reasonably safe to say that the others are going to points somewhere in the dry section of the West. These prunes are association prunes, and Mr. Crandall sold at full association prices.

**PRICE SCHEDULE OF CANNERIES.**—San Jose Herald, July 24: The canneries are beginning work on the peach crop, with the result that a schedule of prices for both peaches and pears is announced. The first named are ranging from \$20 to \$25 a ton, with a very high-grade qualification necessary to bring the last figure. There is an abundance of pears. The limit price at the canneries will probably be about \$30 a ton, although certain canners are offering more for a limited quantity of prime fruit. Shipments East are under way, and the coming week is expected to see carloads moving freely from this valley. The crop on the west side of the valley is developing beyond the expectations held a month or so ago and will be above the average.

**TRAIN SETS GRAIN AFIRE.**—EDENVALE, July 23: A lively blaze occurred in the grain fields of Mrs. Little's ranch last week. Just after the 11 o'clock morning train went by Tilden Strickler discovered the fire, which had evidently been set by a spark from the engine. With a number of men who were working for him Mr. Strickler fought the flames and, reinforced by a water wagon, the fire was finally subdued, but not until about twenty acres of grain had been destroyed.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian: Orchardists in some of the favorite and near-town districts have been offered up to \$23 per ton for their apples this season. At that price is there any other crop of this section which can show as many dollars per acre? The weight system of buying is going to be more general in the future.—The packers have had crews of men go carefully over the orchards which they had purchased and pick off the apples which showed signs of the visit of a moth. Some of these refuse apples have been dumped in the Salsipuedes creek and Pajaro river. They should be taken to tide water or cooked in the orchards where picked.—The contract prices for apples have been in the main about 70 cents per box for four-tier Bellefleurs and 90 cents per box for four-tier Newtowns. The three-tier Bellefleurs have sold at a figure a shade above the four-tier stock of the same variety. The three-tier stock is contracted for cold storage, and is intended for the Eastern holiday trade.

### SHASTA.

**BROWN'S VALUABLE GOATS.**—Millville Tidings: Frank Brown purchased something over 200 head of goats from Joseph Hunt Friday. Mr. Brown already had several hundred head of goats, and this acquisition will make his herd one of the most valuable in the county.

### SOLANO.

**HELP SCARCE.**—Solano Republican, July 26: Some of our orchardists are meeting with difficulty in securing enough help to harvest their fruit crops. Cutters are wanted chiefly and fruit is being left on the trees as long as possible in the hope that more help will soon arrive. We understand that the same condition prevails in the fruit canneries north of here, some of them being operated with less than half the required number of cutters.

### SONOMA.

**THE COMING HOP CROP.**—Santa Rosa Republican: S. W. Purrington, one of the leading hop growers of this county, states that the product grown in this county this year will amount to about 12,000 bales, as compared with a total output of 6000 bales last season. The hops all over this county are looking fine and give promise of an abundant yield.

### STANISLAUS.

**BIG BLAZE IN WEST SIDE FIELDS.**—Modesto Herald: The Westley neighborhood was the scene of an extensive stubble and grain fire last Sunday, the origin, as usual, being sparks from a railroad locomotive. Some 5000 acres of land were burned over, entailing an aggregate loss approximating \$15,000. The S. P. Co. is expected to make good the difference between insurance and actual loss.

**ANOTHER FIRE DESTROYED APPROXIMATELY 300 ACRES OF W. F. DRAPER'S WHEAT,** on land a little northwest of Newman. Report has it that the blaze originated from a fire in the cemetery started to burn foxtail off a lot.

**GRAIN BAG THIEVES.**—Modesto News: Funk Bros. of Grayson are out 2250 grain sacks which were stolen from their ranch within the past few days. The cost of the sacks was \$210, so the thieves made quite a haul.

### SUTTER.

**AVERAGE YIELD NOT LARGE.**—Sutter Independent: Reports of the yield of grain throughout the country are now coming in and, taken as a whole, are not very flattering. In some localities the yield has met expectations, while in others it has fallen short considerably. These facts are not encouraging to the grain raisers who, if compelled to sell now, must accept an exceedingly low price.

### TEHAMA.

**SOME HOGS DYING.**—Red Bluff News: It is said that the swine raisers in different parts of the county are losing some hogs from a disease which resembles hog cholera. So far no great losses have been reported.

**HE WAS A HOG.**—Red Bluff News: A farmer living in the western part of the county some time ago discovered that he had a pig-eating boar with his herd of swine, and he decided to cut short his career. The boar was killed and on cutting him open it was found that he had just eaten twenty-one small pigs.

### TULARE.

**GOOD CROP OF SULTANAS.**—Tulare Register: There is a particularly good crop of seedless Sultanans on the Paige fruit farm this year and some of the vines will go 100 pounds each. W. S. Clark reports that grapes are getting ripe enough to eat and gives promise of an early harvest.

**ORANGE LAND SALE.**—Tulare County

Times, July 25: J. W. Thomas & Co. closed negotiations to-day for a large tract of land in the Exeter district. The transfer includes about 300 acres of fine orange lands. It is a deep, dry bog soil, and occupies the northwestern slope of Rocky hill. This land will go into the hands of a syndicate of rich men, who have abundant means to improve it.

### VENTURA.

**SUGAR CAMPAIGN BEGINS.**—Nordhoff Ojai, July 16: Five hundred people, comprising farm hands, laborers and sugar factory officials, arrived in Oxnard this week. The Southern Pacific Co. was compelled to put on an extra coach to accommodate the increasing traffic. The big output of sugar from the factory makes Oxnard one of the chief shipping points in southern California. Operations at the factory were begun Thursday. The factory is not yet running to its full capacity, but will be grinding 2000 tons a day—the full capacity—next week. There is to be handled a crop of 137 tons of beets, the production of 11,500 acres. The beets will average over 19% in sugar.

### YOLO.

**ALMONDS EARLY.**—Davisville Enterprise, July 25: F. Dickinson exhibits some samples of Nonpareil almonds that are beauties; the hulls are beginning to burst open. It is, we are informed, a little early for almonds. Mr. Dickinson informs us that while his crop is not a full one, the quality is excellent. The difference in price this season is expected to make up for the shortness of crop.

**BLUE STEM WHEAT.**—Davisville Enterprise, July 25: N. Miner finished harvesting the first of this week, having made a run of thirty-one days. His crop on his home ranch was satisfactory, but the yield on the rented land in Egypt was light. He informs us that his Blue Stem wheat turned out all that could be desired, yielding as high as seventeen or eighteen sacks to the acre on ground that was pastured last year and winter-plowed and sown this season.

**RETURNS FROM FOUR ACRES.**—Woodland Democrat: J. W. Gallup, a lessee of some of the Nelson land near the Nelson bridge, planted four acres to potatoes this season. He harvested 100 sacks to the acre and sold the crop for \$1.25 a sack. He has several acres planted to water-melons and the yield is very heavy. Mr. Gallup bored a well on the tract near the county road, and obtained an abundant supply of water at eight feet. The soil is as rich and black at that depth as on the surface.

**FRUIT BURNED AT WINTERS.**—Winters Express, July 26: A \$100,000 fire occurred at Winters last Saturday, the principal losers being the Winters Dried Fruit Co. and a grain warehouse company. The firms lost several buildings, 110 tons of dried apricots and 300 tons of prunes. The California Cured Fruit Association lost \$6000 worth of prunes. The Winters Dried Fruit Co. will erect temporary quarters for the prosecution of their work, and when the fall pack is out of the way will put up a substantial building. J. L. Harlan did the handsome thing by the Winters Dried Fruit Co. He tendered them the use of the Yosolano Fruit Co.'s packing house in which to fill the orders they have for shipment.

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The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular. THE LAWRENCE-WILLIAMS CO., Cleveland O.



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## THE HOME CIRCLE.

### In City Pent.

Oh, sweet at this sweet hour to wander free,  
Or follow some invisible beckoning hand,  
Among the moody mountains, where they stand,  
Awed with the thought of their own majesty!

Sweet, at the folding up of day, to be  
Where on the tattered fringes of the land  
The uncourted flowers of the penurious sand  
Are pale against the pale lips of the sea.

Sweetest to dream, on caseful earth reclined,  
Far in some forest's ancient idleness,  
Under the shadow of its bossy boles,  
Beyond the world's pursuit and Care's access;  
And hear the wild feet of the elfin wind,  
Dancing and prancing in mad caprioles.  
—William Watson in August Century.

### Mrs. Flint's Furniture.

Old Mrs. Drew was "settin' to her front window" darning a stocking of blue and white clouded yarn stretched over a wooden potato masher. She was a small, tidy, alert-looking, little old woman, with very keen black eyes that looked out on life with much of the interest and eagerness of youth.

Phoebe Drew's sharp eyes saw everything within range of her front window, and presently she called out shrilly:

"Marg'ret! Oh, Marg'ret! I want you should come here—quick!"

"I've got my hands in my mixin', an' don't see how I can come, mother."

"Then you'll miss seein' a whole load of things goin' into 'Bina Flint's house. She's got that new bedroom set at last. Ther's a wagon just drove up, an' 'Bina's out in the yard all excited up over it, I'll warrant."

A wagon loaded with furniture was standing before a neat, story-and-a-half frame house painted a pale yellow with dark green blinds. A covered piazza ran along the front of the house, and a small woman, with a corner of a light calico apron pinned over her head, was laying strips of old rag carpet from the piazza steps to the door of the house.

"I'm thankful she's got that bedroom set at last," said Margaret Dodge.

"Yes, but now she'll go to scrimpin' an' savin' to buy a patent rocker, or a new sofa, or a big looking-glass, you see if she don't! An' she'll feed her family on boiled beef, an' potatoes, an' have stewed prunes for dessert an' dried apples for tea, until it is paid for. Her family must have et a bar'l of stewed prunes an' another o' dried apples, savin' to pay for the lace curtains 'Bina's got to her parlor windows."

"Look what a time 'Bina's had savin' for her fine parlor carpet, and then, the minnit it was down, she discovered that it was too fine for her old chairs, an' so the fam'ly went back to cheap boiled beef an' prunes to pay for the chairs. Then they had to keep it up to pay for a new parlor table an' a fine nickel-trimmed base burner an' a hangin' lamp. Then the old paper had to be scraped off, an' new satin' and gilt paper put on. Then come the lace curtains an' a crinkled plush sofa, an' now that they've got it 'Bina never allows one of 'em to have the satisfaction of settin' foot in the parlor to see it all, an' you know as well as I do that she keeps a rope tied across in front o' the sofa, so that no one can set down in it an' crush the crinkle out o' the plush. I don't see how she's goin' to make up her mind to let anyone use that bedroom set, for fear they'll scratch it or spill a drop o' water on the washstand. I should hate to live for furniture as 'Bina does."

"Oh, I guess she lives for other things, too, mother."

"I never see any sign of it if she does. Her one idee seems to be to accumulate furniture that her family don't get no good of after they've half starved themselves to git it. You know she wouldn't let her daughter Lucy have her eighteenth birthday

party in the parlor, 'cause she was so afraid they'd track in dirt or scratch the furniture. An' you know that she hardly ever entertains her own callers in the parlors. Most she does is to fling open the door, so they can see in from the settin' room across the hall. What sense is there in such performances, I'd like to know?"

"It does seem foolish."

There were others in the small town of Derby Center who were of the opinion that 'Bina's mind "run to furniture" to the exclusion of higher and better things. There were members of her own family who cherished the belief in secret, but her husband was too loyal to her and too considerate of her feelings to voice his real conviction regarding the matter, and her children were too respectful and too well trained in 'Bina's severe school of discipline to offer advice to their mother, or to question her authority.

The proposed purchase of the bedroom set, the arrival of which had given so much activity to old Mrs. Drew's tongue, had, it is true, been mildly opposed by some of the Flint family; but 'Bina had ignored this opposition, and the long suffering family had again been put on short rations that the saving-up process for the bedroom furniture might begin.

Mr. Flint condoned this by saying that "mother meant well," and the children yielded the point because there was nothing else to be done.

"I confess that I believe in taking care of nice things when you get them," admitted Mrs. Flint. "I was brought up to take care of things. My mother had a bureau and six chairs that were a part of her setting out, and when she'd been married twenty-five years that bureau and those chairs were just as nice as the day my grandfather gave them to my mother. She took care of them. Us children never went near that bureau, and we were taught never to sit in one of those nice chairs. How some folks buy nice furniture and use it right along is a mystery to me!"

There was dismay in the Flint family when, a week after the arrival of the bedroom set, Mrs. Flint announced her intention of saving up for a complete new set of dining-room furniture.

"If there is anything I do admire to see, it's a real nicely appointed dining-room," said Mrs. Flint. "I've lain awake night's sometimes, planning just how I'd like to furnish up my dining-room. I'm going to have a sideboard and chairs and table and everything of fine polished oak, with a handsome rug for the table to stand on."

"Yes, an' you'll see that when she gets the dining-room all fixed up like that, she'll make the family eat in the kitchen, you see if she don't," said old Mrs. Drew.

"Oh, I guess not, mother," said Margaret.

"She will, too, an' I swan I'd rebel then, if I never did before, if I was Myron Flint. Then you'll see that when 'Bina gets the dining-room furnished up to suit her, she'll discover that her dishes don't match with the new furniture, an' she'll go to saving up to buy a crate of new chiny. Well! I pity the stummicks of the Flint fam'ly, now I do! Myron's got thin an' peaked as a rail, savin' up for that bedroom set, and all of them look hungry. It's queer what some folks will do for a lot of old furniture, now it just is! When I kep' house all the furniture I had was things that could be used for my fam'ly's comfort an' convenience. It's queer how some folks will spend their days fighting flies and dust, and taking care of furniture and then think they're really living. The real home spirit ain't in such houses. I like to see a house look as if folks lived in it. Ketch me makin' a furniture shop out o' my house!"

The saving up for the new dining-room furniture was begun in the Flint home and with it came the usual feeling of repressed, but none the less real, discomfort. Rob, who had always been less submissive to his mother's discipline than any of the other Flint children, gave outspoken expression to his feelings.

Over to Ted Naylor's house they have ev'ry room in the house wide open,

and they've got nicer things than we have. Their parlor stands wide open, and the shades are up all of the time. I asked Ted if his mother wasn't afraid the sunshine would fade the carpet, and he laughed and said he reckoned his mother would have sunshine in her home, no matter what it faded."

It was true that Mrs. Flint was most industrious, and she had "scrimped" as few women would or could "scrimp" for any purpose whatever. She did all of her own work, even to the washing and ironing, and it was her boast that she never hired anything done. She was regarded as a woman who had faculty, and one who could turn her hand to anything. Her knowledge of what was going on in the world was meager, because she had "no time to read." She had a sincere conviction that she was doing her duty as a wife and mother by being unfailingly industrious and by keeping her house immaculate. She had a vague idea that furniture was refining in its influence, and that it increased the standard of one's respectability. Each plush chair and fancy table added to her competency, if not to her comfort and the comfort of her family. So 'Bina Flint saved and slaved for—furniture.

When the new dining-room furniture had become a reality in polished oak, it did not surprise her family to have Mrs. Flint say:

"I guess that when we are all by ourselves we'll eat in the kitchen and save the new dining-room furniture from being all scuffed up. It would get shabby in no time if we used it common. The kitchen is good and big, and we can just as well eat in it as not. Then the dining-room will be so nice when company comes. I'll carpet one end of the kitchen and—"

"Please don't, ma," said Bob, with a twinkle in his eye.

"Why not?"

"Because then we'll have to eat in the back yard to save the carpet."

The general laugh that followed saved Bob from the reprimand that he deserved, but might not have received, because of Mrs. Flint's serenity of mind caused by the acquisition of the new dining-room furniture.

Several hours later in the day Mrs. Drew called out to her daughter, who was rolling out cookies in the kitchen:

"Marg'ret! Marg'ret!"

"Well, mother?"

"Myron Flint's comin' in at our front gate, and you'll have to go to the door. I'm too rheumatically to git up and go. Seems to me he's excited about something."

Myron Flint was as excited as it was possible for a man of his phlegmatic temperament to be. When Margaret opened the door he said:

"Is it so you can come over to my house and stay with 'Bina while I go for the doctor for her? She's been taken real sick all of a sudden. I'm 'most afraid it's a shock. The children are all at school and I hate to have her left alone while I go for Dr. Martin."

"I'll go right over," said Mrs. Dodge; and Myron Flint hurried away.

"What'd he want?" called out Mrs. Drew the moment she heard the front door close.

"'Bina's been taken sick, and he wants me to go and stay with her until the doctor comes."

"What's the matter with her?"

"He doesn't know."

"I know; it's too much furniture and not enough beefsteak. She's looked all run down for some time. She ain't been able to go to church for three Sundays, she's been so tired out. Some folks would call it a judgment, if she never got to eat off that new oak table."

"I guess it's nothing that serious, mother; but she looked awfully peaked of late."

Margaret thought that 'Bina looked more than peaked, as she lay with a drawn and pallid face and colorless lips on the sitting-room lounge. She made no reply when Mrs. Dodge said, with genuine sympathy and anxiety:

"Why, 'Bina Flint, what ails you?"

Old Dr. Martin asked a few questions when he came, and then said:

"She is nervously and physically exhausted. If she escapes a long spell of

nervous prostration, she can be thankful. I want her put in the largest and sunniest bedroom in the house."

"The room over the parlor is the largest and sunniest, but I do know as 'Biny would want it used common, for it's her new bedroom furniture in and—"

"What's the furniture there for, if it's not to be used?" interrupted Dr. Martin sharply.

"Very well," said Myron meekly. "All I was thinkin' of was of what 'Bina would say."

"She isn't going to say much of anything right away, and I'll make it all right with her," said the doctor. "She'll have to have a nurse."

Although Myron was not penurious, he groaned inwardly at this, for he was a poor man, and all of the ready money had been spent for the dining-room furniture. However weak 'Bina and Myron Flint were in other respects they were rigidly honest and paid cash for everything they purchased. That delusion and snare, the monthly or weekly payment store, had no power over them.

Whatever the cause that had laid her low, 'Bina Flint was very ill indeed before she began to mend. It seemed at times as if she had reached the very border land between the life that is and that which is to come. Slowly and silently she came creeping back to health and strength, and it was many weeks before color came to her wan cheeks or strength to her enfeebled body. In the depths and vales of the border land to which she had been, there had come to 'Bina Flint visions and dreams that she could not forget when she came back to the world. It had been a time of great stress and strain for the patient and affectionate Myron, and he looked worn and haggard when 'Bina was beginning to look quite like herself again. His mind was burdened with something he feared to tell 'Bina, and yet she must know it. He hung around her bed eager to render her any slight service that would add to her comfort or happiness. He gave her unstinted praise for her fidelity as a wife and mother in the past, and told her of his great sorrow when he feared she would not recover.

Finally the day came when Dr. Martin said that 'Bina might be taken down stairs. It was a beautiful morning in early October. The trees were in fullness of their scarlet and golden splendor. The air was so balmy that Dr. Martin had said that 'Bina might be taken out on the porch for a few minutes.

Myron came into his wife's room with the air of a man who had made up his mind to perform an unpleasant duty because there was no escape from it.

Sitting down by the bed, he took one of his wife's thin hands in his and said:

"'Biny."

"Well, Myron?"

"You an' me have always been honest, hav'n't we?"

"We have tired to be, Myron."

"Yes, we have, that's so; an' you wouldn't want us to be any different now."

"Of course not, Myron."

"Well, 'Biny, I've had to do something, in order to keep honest, that I've been afraid you wouldn't like, an' it's fretted me a lot."

"I could see that you were fretting about something, Myron."

"Well, I was. You know that we've never borrowed a dollar in all our lives."

"No, and I hope that we'll never be compelled to."

"An', of course, you bein' sick so long has made lots of expense—not that I'm makin' any complaint about that. I'd gladly bear ten times the expense it's been to see you lookin' as you begin to look now. But, then, there was the nurse to be paid her \$15 ev'ry Saturday night, an' the other expenses footed up big, an' so—so—I hate to tell you, 'Biny."

"Go on, Myron."

"I had to sell the parlor furniture."

"You did?"

"Yes, an' that isn't all, 'Biny; the new dining-room furniture has gone



back to the store. We hadn't used it any, an' Smith & Brown said they'd take it back, as we'd been such old customers of theirs. We've got the old things back in the dining-room, but the parlor hasn't a thing in it but the carpet. I'm dreadful sorry, 'Biny, but there wasn't any other way to keep out of debt, an' we're all willing to save up an' get new things for you. I hope you won't take it too much to heart, 'Biny."

"Myron," said 'Bina, in a sweetly serious tone, as she reached out and took both his hands in hers, "I don't take it to heart at all—at least, not in the way you think. I'm glad you did just what you did. It was the right thing to do. And as for saving up for new furniture, we will not do it again. I am sorry we ever did it at all. It added nothing to the value of life. I have had time to do a good deal of thinking since I have been laying here, and going down so near to the 'valley of the shadow of death' has made me have thoughts I have never had before."

"Why, 'Biny!"

"Yes, Myron; I've new ideas about life. I can't tell you all I feel now, but you and the children need not worry about having to save up for anything so unnecessary as fine furniture. We'll start out on a new track now. We'll not have any parlor. We need that room for everyday use, now that the children are so large and we have so many of them. We're going to live—well, rationally, Myron."

"I never saw such a change come over a livin' mortal as has come over 'Biny Flint," said old lady Drew, on returning from a long call at the Flint home three months after 'Bina's recovery. "She's got just some plain wooden furniture in the parlor, an' she keeps it wide open an' all the shades in the house flung up all the time, an' the sun streamin' in, an' I should judge, from the smell comin' from the kitchen, that they was goin' to have a mighty good dinner. An' 'Biny was tellin' me about a book she's been readin' about plain livin' an' high thinkin'. It or something else has made her feel that there is something beside furniture to live for in this life. It'd be a good thing if more folks come to that conclusion, that's what I say."—The Housewife.

### The Quagga's Heels.

An amusing story is told by Cleveland Moffett in his paper on "The Wild Beast Tamer" in St. Nicholas for August.

Well, it was here that I heard the story. Bonavita, it appears, was standing on the bridge one morning when there arose a fearful racket in the run-way; and looking in he saw the quagga tearing along toward him. He concluded that some one had unfastened the door, and was just preparing to check the animal, when around the curve came Rajah in full pursuit. Bonavita stepped back, drew his revolver, and, as the tiger rushed past, fired a blank cartridge, thinking thus to divert him from the quagga. But Rajah paid not the slightest heed, and in long bounds came out into the arena hard after the terrified quadruped, which was galloping now with the speed of despair. A keeper who was sweeping clambered up the iron sides and anxiously watched the race from the top. Bonavita, powerless to interfere, watched from the bridge.

Of all races over run in a circus this was the most remarkable. It was a race for life, as the quagga knew and the tiger intended. Five times they circled the arena, Rajah gaining always, but never enough for a spring. In the sixth turn, however, he judged the distance right, and straightway a black-and-yellow body shot through the air in true aim at the prey. Whereupon the quagga did the only thing a quagga could do—let out both hind legs in one straight tremendous kick; and they do say that a quagga can kick the eyes out of a fly. At any rate, in this case a pair of nervous little heels caught the descending tiger squarely under the lower jaw, and put him to sleep like a nice little lullaby. And that was the end of it. The quagga trotted

back to its cage, Bonavita put up his revolver, the frightened sweeper climbed down from the bars, and Rajah was hauled back ignominiously to his den.

### Some Domestic Animals I Have Known.

Jeannie Betts Hartswick sings of certain "Domestic Animals I Have Known" in the Century for August, with pictures thereof by Fanny Cory. Among them are "The Clothes Horse," "The Fire Dogs," "The Monkey Wrench" and "The Sewing Bee."

#### THE CLOTHES HORSE.

This angular and ribby steed  
Is famed for neither grace nor speed;  
And yet its worth is recognized  
When once a week 'tis exercised,  
For maidens then upon it place  
The trappings of the human race.

#### THE FIRE DOGS.

Upon the hearth these faithful dogs  
Guard zealously the blazing logs.  
They boast a lengthy pedigree  
Of ancient English ancestry.  
Their breed is growing very rare—  
I am in luck to own a pair.

#### THE MONKEY WRENCH.

Thou art, to womankind at least,  
A wild and unfriendly beast—  
Elusive, slippery and wild—  
Although with man thou'rt tame and mild.  
Since thou to him art such a friend,  
Perhaps from monkeys men descend.

#### THE SEWING BEE.

This is, in truth a busy bee!  
It hums about the family tree.  
To sting it oftentimes contrives,  
And on a dish of gossip thrives.  
Whene'er its baleful buzz I hear,  
If possible I disappear.

### Taming a Lion.

In Cleveland Moffett's series of papers on "Careers of Danger and Daring," the eighth article, "The Wild Beast Tamer," appears in the St. Nicholas, for August.

The wild beast tamer as generally pictured is a mysterious person who stalks about sternly in high boots, and possesses a remarkable power of the eye that makes lions and tigers quail at his look and shrink away. He rules by fear, and the crack of his whip is supposed to bring memories of torturing points and red-hot irons.

Such is the story book lion tamer, and I may as well say at once that outside of story books he has small existence. There is scarcely any truth in this theory of hate for fear and conquest by fear. It is no more fear that makes a lion walk on a ball than it is fear that makes a horse pull a wagon; it is habit. The lion is perfectly willing to walk on the ball, and he has reached that mind, not by cruel treatment, but by force of his trainer's patience and kindness and superior intelligence.

Of course, a wild beast tamer should have a quick eye and delicate sense of hearing, so that he may be warned of a sudden spring at him or a rush from behind; and it is important that he be a sober man, for alcohol breaks the nerve or gives a false courage worse than folly; but the quality on which he must chiefly rely and which alone can make a great tamer—not a second-rate bungler—is genuine fondness for his animals. This does not mean that the animals will necessarily be fond of the tamer; some will be fond of him, some will be indifferent to him, some will fear and hate him. Nor will the trainer's fondness protect him from fang and claw. We shall see that there is danger always, accident often, but without the fondness there would be greater danger and more frequent accident. A fondness for lions and tigers gives sympathy for them, sympathy gives understanding of them, and understanding gives mastery of them, or as much mastery as is possible. What but this fondness would keep a tamer constantly with his animals, not only in the public show (the easiest part) but in the dens, in the treacherous runaway, in the strange night hours, in the early morning romp, when no one is looking, when there is no reason for being with them except the tamer's own joy in it?

I do not propose now to present in

detail the methods of taming wild beasts, rather what happens after they are tamed; but I may say that a lion tamer always begins by spending weeks or months in gaining a new animal's confidence.

Day after day he will stand for a time outside of the cage, merely looking at the lion, talking to him, impressing upon the beast a general familiarity with his voice and person. And each time, as he goes away, he is careful to toss a piece of meat as a pleasant memento of his visit.

Later he ventures inside the bars, carrying some simple weapon—a whip, a rod, perhaps a broom, which is more formidable than might be supposed, through the jab of its sharp bristles. One tamer used a common chair with much success against unbroken lions. If the creature came at him there were the four legs in his face; and soon the chair came to represent boundless power to that ignorant lion. He feared it and hated it, as was seen on one occasion when the tamer left it in the cage and the lion promptly tore it into splinters.

Days may pass before the lion will let his tamer do more than merely stay inside the cage at a distance. Very well; the tamer stays there. He waits hour after hour, week after week, until a time comes when the lion will let him move nearer, will permit the touch of his hand, will come forward for a piece of meat, and at last treat him like a friend, so that finally he may sit there quite at ease, and even read his newspaper, as one man did.

Last of all he begins the practice of tricks; the lion must spring to a pedestal and be fed; he must jump from one pedestal to another and be fed, must keep a certain pose and be fed. A bit of meat is always the final argument, and the tamer wins (if he wins at all, for sometimes he fails) by patience and kindness.

"There is no use getting angry with a lion," said a well-known tamer to me, "and there is no use in carrying a revolver. If you shoot a lion or injure him with any weapon, it is your loss, for you must buy another lion, and the chances are that he will kill you anyway, if he starts to do it. The thing is to keep him from starting."

### The Eden Garden in Venice.

In a long, illustrated article on "Venice Gardens," Mr. Lee Bacon writes thus in the August Century of the Eden Garden in the City by the Sea:

Where the roses bloom in greatest profusion is the Eden Garden, on the far side of the Giudecca, stretching away in the direction of the salt marshes, which give out such strange seaweed odors.

The English gardener, who speaks with a bur and an Italian accent at the same time, told me the property once belonged to a "convict." I surmised that he intended to say convent.

Here the late Empress of Austria was wont to sketch, and here the Italian actress Duse, fortunate in being a welcome guest, spends many mornings wandering up and down its shady walks. One is rarely near enough to see whether it be Alfred de Musset, Dante, or one of the English authors she has in hand; for as one advances within sight and sound, the slight figure is apt to lose itself in the crosspaths, though when Henry Bacon was painting his picture of the Virgin among the lilies he was often aware of the shadow of the noted Italian falling almost on his canvas. These paths are overhung with grapevines trained upon trellises, with here and there great acanthus plants, with the wonderful foliated leaves which seem to have been the inspiration and base of four-fifths of the world's decorative designs and carvings. Farther along, hundreds of lily plants raise their straight stiff stalks, and at a certain time are covered with so many blooms that one is fairly driven from them by the heavy perfume.

"It's very queer," thought baby,  
"But, as everybody knows,  
The longer that my body gets  
The shorter grow my clothes!"

## DOMESTIC ECONOMY.

### Domestic Hints.

**BAKED SWEETBREADS.**—Clean the sweetbreads as usual, then boil them gently till quite firm. Drain and wipe them. Roll them in beaten egg, then in breadcrumbs, and put in a baking pan well buttered till they are quite brown. Baste a bit with melted butter if necessary while baking. After taking them out of the pan pour a wineglassful of sherry into it to heat, and pour this over the sweetbreads.

**BOILED CAPON.**—Have the capon drawn and well "cleaned," and boil in equal quantities of water and white wine. At the last of the cooking add salt and a bit of white pepper to the water, which should by the time the capon is tender be reduced to less than a pint. Take out the capon, add to the water in which it was boiled a dozen fresh mushrooms chopped, a few truffles chopped and thicken with a little flour braided with butter.

**CHICKEN'S LEGS DEVILED.**—Skin the cold, dressed legs of the chicken over night, and score the flesh parallel to the bone. Make a sauce by mixing a tablespoonful of oil, a teaspoonful of salt, a saltspoonful of pepper and a few drops of anchovy. Insert this sauce into the scores of the flesh and spread it about. In the morning, grease the bars of the gridiron and make them hot, put on the deviled legs and broil, turning until well cooked. Serve very hot.

**STEWED CUCUMBERS.**—For a quickly prepared dish try this: Cut the stem end from the three cucumbers, put into boiling water and cook three minutes. Drain and put in ice water. Make a white sauce as follows: One tablespoonful of butter melted in frying pan, stir one tablespoonful of flour into this till smooth and cooked, but not browned, add a teaspoonful of salt, little cayenne pepper, one cupful of milk; stir until smooth and it comes to boil, then pull back and add the cucumbers sliced, and simmer till tender.

**RICE BORDER WITH VEGETABLES OR HARD-BOILED EGGS IN CREAM SAUCE.**—Three-quarters of a cup of Carolina rice, picked over carefully and washed. Boil fifteen minutes in salted water. Drain off the water and have one pint and a half of boiling milk in a double boiler, stir the rice into this and cook until all the milk is absorbed, then add a tablespoonful of butter. Butter a border mould well, turn the rice into it, pressing it down so that the form will be perfect, put in the plate heater for five minutes, turn out on a platter and serve with vegetables or hard-boiled eggs in a cream sauce.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, July 31, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Dec.
Wednesday.....	71 1/4 @ 73	73 1/4 @ 74 1/4
Thursday.....	72 1/4 @ 70 1/4	74 1/4 @ 72 1/4
Friday.....	71 1/4 @ 70 1/4	73 1/4 @ 72 1/4
Saturday.....	69 1/2 @ 70	71 1/4 @ 72
Monday.....	69 @ 67 1/2	70 1/4 @ 69 1/2
Tuesday.....	67 1/2 @ 68 1/4	69 1/4 @ 71

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	5s 9 1/2 d	5s 11 d
Thursday.....	5s 9 1/2 d	5s 10 1/2 d
Friday.....	5s 9 d	5s 10 1/2 d
Saturday.....	5s 7 1/2 d	5s 8 1/2 d
Monday.....	5s 6 1/2 d	5s 8 d
Tuesday.....	5s 6 1/2 d	5s 7 1/2 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 04 1/4 @ 1 03 1/4	— @ —
Friday.....	1 02 1/4 @ 1 02 1/4	1 08 1/4 @ —
Saturday.....	1 01 1/4 @ 1 01 1/4	1 05 1/4 @ 1 05 1/4
Monday.....	1 00 1/4 @ 1 00 1/4	— @ —
Tuesday.....	1 01 @ 1 01 1/4	1 05 @ —
Wednesday.....	1 01 1/4 @ —	— @ —

## WHEAT.

With the poor condition of the cereal and other crops, more particularly corn, in a large area of the grain lands of the United States east of the Rockies, it is surprising that wheat is not commanding better figures in the local market. That is, it is surprising if consideration stops at above point, but when our inadequate facilities for transporting grain abroad, the heavy cost of the same, and the long distance traversed under the present mode of shipment, are each and all taken into the calculation, the dragging market and the low and unsatisfactory prices experienced are more readily accounted for. Ocean freight rates are nearly double what they should be, and no great relief on this score need be looked for until a ship and steamer route across the isthmus is established. With such a reduction in freight rates as could be reasonably looked for if a ship canal across the isthmus was opened, wheat could to-day be commanding in this market a figure which would afford some profit to a large number of growers and would give a respectable minority who are especially well located a chance to lay up some money. But until we are brought into closer touch with the markets of Europe the business of wheat growing is not apt to prove very remunerative. Only one wheat ship has cleared from here the past week and only eight the current month.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.04 1/4 @ 1.00 1/2.  
May, 1902, delivery, \$1.06 1/2 @ 1.05.  
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.01 1/2 @ —; May, 1902, —.

California Milling, old.....	\$1 00	@ 1 03 1/4
Cal. No. 1 shipping, alongside.....	95	@ 97 1/4
Oregon Valley.....	97 1/4 @ 1 02 1/4	
Washington Blue Stem.....	1 00	@ 1 02 1/4
Washington Club.....	97 1/4 @ 1 00	
Off qualities wheat.....	95	@ 97 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	65 2 1/4 @ 65 3 1/4	65 0 1/4 @ 65 0 1/4
Freight rates.....	37 1/4 @ 40 1/2	37 1/4 @ 40 1/2
Local market.....	\$1 05 @ 1 07 1/4	95 @ 98 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

There is a moderate movement of flour to South America and Asia, mostly under contracts entered into some time ago. Business locally is far from brisk. Prices are without quotable change, and the market is not remarkable for firmness. Supplies are of fairly liberal proportions for this season of the year.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

Business doing in this cereal is not of heavy volume and is mainly on local account. Values are at a rather narrow range, best feed qualities selling close up to figures named by shippers for export

grades. This is likely to prove the case until ocean tonnage is in better supply and freight rates are easier. Most of the barley coming forward is showing good average quality, and this accounts to some extent for the comparatively small gap at present between prices of feed and brewing descriptions. Speculative dealing in this cereal was of a light order the past week, and fluctuations in Call Board values of small compass.

Feed, No. 1 to choice.....	72 1/4 @ 73 1/4
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	77 1/4 @ 82 1/4
Chevalier, No. 1 to choice.....	— @ —
Chevalier, No. 2.....	— @ —
Chevalier, poor.....	— @ —

## OATS.

Where there has been no great amount of activity observable in the oat market the past week, there has been a fair demand, and values have been tolerably well maintained at prevailing rates. Offerings continue to be largely Reds and Blacks, with trading mostly in the first-named kind.

White Oats, fancy feed.....	1 17 1/4 @ 1 23 1/4
White, good to choice.....	1 10 @ 1 15
White, poor to fair.....	97 1/4 @ 1 05
Gray, common to choice.....	1 00 @ 1 10
Milling.....	1 20 @ 1 25
Surprise, good to choice.....	1 20 @ 1 25
Black Russian.....	85 @ 1 00
Red.....	90 @ 1 15

## CORN.

Market is very poorly supplied and is unfavorable to buyers. There is little at present upon which to base quotations other than asking prices East, plus the freight charges to this center. There is naturally not very much demand at existing high range of values.

Large White, good to choice.....	1 60 @ 1 65
Large Yellow.....	1 55 @ 1 60
Small Yellow.....	1 65 @ 1 70
Eastern, in bulk (carload lots).....	1 55 @ —

## RYE.

Prices are without quotable improvement. There is more offering than there is immediate demand for.

Good to choice, new.....	75 @ 80
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## BUCKWHEAT.

Market is very lightly stocked, but demand is of a slow order. Free sales could not be readily effected at top figures quoted.

Good to choice.....	1 50 @ 1 75
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## BEANS.

Considerable shipping demand, mainly from Texas, for colored beans, has caused considerable reduction in stocks of Pinks and Bayos, and also some hardening in values for these varieties. There are very few Bayos now offering and stocks of Pinks are by no means large. Limas are in very limited supply and are apt to continue so until new crop begins to come forward. In white beans there is not much doing at present, and aside from a little easier tone for Lady Washingtons, there are no changes to note. Stocks of whites are largely of above named variety.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 60 @ 4 90
Lady Washington.....	3 50 @ 3 75
Butter.....	— @ —
Pinks.....	1 85 @ 2 00
Bayos, good to choice.....	2 50 @ 2 60
Reds.....	3 00 @ 3 25
Red Kidney.....	4 25 @ 4 50
Limas, good to choice.....	6 30 @ 6 40
Black-eye Beans.....	2 75 @ 3 25
Horse Beans.....	1 00 @ 1 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

## DRIED PEAS.

Not much doing in this line. Choice Green Dried are being steadily held, while market for off qualities is weak. Niles Peas are receiving very little attention, and to effect free sales at this date, material concessions would probably have to be granted buyers.

Green Peas, California.....	2 00 @ 2 50
Niles Peas.....	1 50 @ 1 75

## WOOL.

Owing to the strike of teamsters preventing the free movement of wools, not much business has been consummated the past week. If the market had not been thus handicapped, it is probable there would have been considerable trading, but no very active movement would have been experienced, as the wools are not now here to admit of such a condition of affairs. Present offerings are principally coarse and medium wools.

## SPRING.

Humboldt and Mendocino.....	14 @ 15 1/4
Humboldt and Mendocino Lambs.....	11 @ —
Northern, free.....	12 @ 13
Northern, defective.....	10 @ 11
Middle Counties, free.....	10 @ 11
Middle Counties, defective.....	9 @ 10
Southern, 12 mos.....	8 @ 9
Southern, free, 7 mos.....	7 @ 8
Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13

Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

San Joaquin Lambs.....	7 1/4 @ 9
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## HOPS.

The same inactivity previously noted continues to prevail in the hop market, with no spot supplies worth mentioning, and nothing doing in the way of contracting. New hops are expected to put in an appearance from earliest sections in a few weeks.

Good to choice 1901 crop.....	13 @ 15
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## HAY AND STRAW.

Arrivals and offerings showed a material decrease, owing to shippers being notified to hold back supplies on account of the teamsters' strike. There was enough for the immediate demand, however, and prices showed no quotable improvement.

Wheat, good to choice.....	7 50 @ 10 00
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 00 @ 8 50
Barley and Oat.....	6 00 @ 8 50
Alfalfa.....	7 00 @ 9 00
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 1/2 bale.....	25 @ 42 1/2

## MILLSTUFFS.

With few flouring mills running, and the amount of mill offal offering of very limited volume, the market showed decided firmness, sellers having much their own way as to prices. Milled Corn was in light stock and high. Rolled Barley remained quotably as last noted, with supplies ample for the demand.

Bran, 1/2 ton.....	17 50 @ 18 50
Middlings.....	20 00 @ 21 00
Shorts, Oregon.....	17 50 @ 19 00
Barley, Rolled.....	17 00 @ 17 50
Cornmeal.....	32 00 @ —
Cracked Corn.....	33 00 @ —

## SEEDS.

There is little doing in seeds of any description quoted herewith, as much due to absence of supplies of wholesale magnitude as to limited inquiry. Quotable values are without appreciable change, but are for the time being largely nominal.

Mustard, Trieste.....	Per cth. — @ —
Mustard, Yellow.....	— @ —
Flax.....	2 50 @ 3 00
Alfalfa, Utah.....	— @ —
Alfalfa, California.....	— @ —

Canary.....	3 1/4 @ 3 1/4
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 @ 3 1/4

## BAGS AND BAGGING.

The Grain Bag market is ruling quiet and is weak at the quotations, most of the season's requirements having been satisfied. Wool Sacks are held practically the same as for some time past, with moderate inquiry on account of Fall clip.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	8 @ 8 1/4
San Francisco Grain Bags, 22x36, spot.....	8 @ 8 1/4
State Prison Bags in lots of 2000, 100.....	— @ —
Wool Sacks, 4 lbs.....	3 1/2 @ 3 3/4
Wool Sacks, 3 1/2 lbs.....	3 1/4 @ 3 1/2
Fleece Twine.....	7 1/4 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/4 @ 7 1/4

## HIDES, PELTS AND TALLOW.

Market for Hides shows fairly healthy condition, arrivals meeting with tolerably prompt sale at prevailing rates. Pelts are not in very active request, but last quoted prices continue in force. Tallow is bringing practically the same figures as for several weeks past and is not lacking for custom.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/4 @ —	9 @ —
Medium Steers, 48 to 56 lbs.....	9 1/4 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/4 @ 9	8 @ —
Heavy Cow Hides, over 60 lbs.....	9 @ 8	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/4 @ 9	8 @ —
Wet Salted Kip.....	9 1/4 @ —	8 1/4 @ —
Wet Salted Veal.....	9 1/4 @ —	8 1/4 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	— @ —
Salted Horse Hides, medium.....	2 00 @ —	— @ —
Salted Horse Hides, small.....	1 00 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 00 @ —	— @ —
Dry Colts' Hides.....	50 @ —	— @ —
Pelts, long wool, 1/2 skin.....	75 @ —	— @ —
Pelts, medium, 1/2 skin.....	50 @ —	— @ —
Pelts, short wool, 1/2 skin.....	30 @ —	— @ —
Pelts, shearing, 1/2 skin.....	10 @ —	— @ —
Deer Skins, best summer.....	35 @ —	— @ —
Deer Skins, good medium.....	— @ —	30 @ —
Deer Skins, thin winter.....	— @ —	10 @ —
Elk Hides.....	10 @ —	— @ —
Tallow, good quality.....	4 1/4 @ —	4 @ —
Tallow, No. 2.....	4 @ —	4 @ —
Goat Skins, perfect.....	30 @ —	37 1/2 @ —
Goat Skins, damaged.....	10 @ —	20 @ —
Kid Skins.....	5 @ —	10 @ —

## HONEY.

Only very moderate quantities offering and nothing in spot supplies to indicate that this year's yield was of liberal proportions. Much of this season's honey, however, is being held back at producing points. Bids of large operators continue under the views of holders.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/4 @ 5
Extracted, Amber.....	4 @ 4 1/4
White Comb, 1 lb frames.....	11 @ 12 1/4
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7 1/4

## BEESWAX.

Stocks are small, affording buyers very poor opportunity to dictate as to prices. There is no active inquiry, however, at current quotations, which remain at same range as for some time past.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 26

## LIVE STOCK AND MEATS.

There has been a quiet market for Beef since last review at generally easy rates, and nothing to warrant anticipating any radical fluctuations in prices in the near future. Mutton was in fair request, values ruling steady, with the demand about equal to the supply. Veal brought good average figures and Lamb sold, as a rule, to very fair advantage. Hogs were not in large receipt, and met with a rather firm market, prices continuing at practically the same range as previous week.

Beef, first quality, dressed, net 1/2 lb.....	6 1/4 @ 6 1/4
Beef, second quality.....	6 @ 6 1/4
Beef, third quality.....	5 1/2 @ —
Mutton—ewes, 6 1/2 @ 7c; wethers.....	7 @ 7 1/4
Hogs, hard grain fed, medium.....	6 1/2 @ 6 1/4
Hogs, small, fat.....	6 1/2 @ 6 1/4
Hogs, large, hard.....	5 1/2 @ 6
Hogs, feeders.....	— @ —
Hogs, country dressed.....	7 1/4 @ 7 1/4
Veal, small, 1/2 lb.....	9 @ 10
Veal, large, 1/2 lb.....	8 @ 10
Lamb, spring, 1/2 lb.....	8 1/4 @ 9

## POULTRY.

Arrivals were lighter than previous week, but the market failed to develop any noteworthy firmness, being seriously handicapped with large carry-over stocks of live, and heavy quantities of dressed in cold storage. Should no large quantities arrive the coming week, there will probably be an improved tone, accompanied by a slight recovery in prices.

Turkeys, live hens, 1/2 lb.....	9 @ 10
Turkeys, live gobblers, 1/2 lb.....	8 @ 9
Hens, California, 1/2 dozen.....	4 00 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 50 @ 5 00
Fryers.....	4 00 @ 4 50
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	1 75 @ 2 25
Ducks, old, 1/2 dozen.....	2 50 @ 3 00
Ducks, young, 1/2 dozen.....	3 00 @ 4 00
Geese, 1/2 pair.....	1 00 @ 1 25
Goslings, 1/2 pair.....	1 25 @ 1 50
Pigeons, old, 1/2 dozen.....	1 50 @ 1 75
Pigeons, young.....	1 25 @ 1 50

## BUTTER.

While there were no very heavy receipts of fresh, stocks of other than strictly fancy were in excess of immediate needs and market for the ordinary run of offerings inclined against dealers. Retailers are now running to considerable extent on cold storage stock.

Creamery, extras, 1/2 lb.....	19 @ 20
Creamery, firsts.....	18 @ 19
Creamery, seconds.....	— @ —
Dairy, select.....	18 @ 19
Dairy, firsts.....	17 @ 17 1/4
Dairy, seconds.....	15 @ 16
Dairy, soft and weedy.....	— @ —
Mixed store.....	13 @ 14
Creamery in tubs.....	18 @ 19 1/4
Pickled Roll.....	— @ —
Firkin, California, choice to select.....	17 @ 18
Firkin, common to fair.....	15 @ 16

## CHEESE.

The same healthy tone as last noted is prevailing, with prospects that market will continue firm for several months to come, although prices are not expected to rule at a much higher range than now current.

California, fancy flat, new.....	9 1/4 @ 10
California, good to choice.....	9 @ —
California, fair to good.....	8 1/4 @ —
California Cheddar.....	— @ —
California, "Young Americas".....	10 @ 11

## EGGS.

Strictly choice to select fresh were in only moderate receipt, as is usual at this date, and for such stock the market was moderately firm, with some sales above quotations. There was no scarcity of supplies, however, of the more common grades, and for other than fancy stock the market was devoid of firmness. Cold storage eggs are being offered freely and market for same is favorable to buyers.

California, select, large, white and fresh.....	20 @ 21
California, select, irregular color & size.....	17 @ 19
California, good to choice store.....	14 @ 16
Eastern, good to choice.....	15 @ 18

## VEGETABLES.

Onion market was slow and lower. The labor strikes not only interfered with the



free movement of large quantities by teams, but prevented securing crates in sufficient quantity to enable wholesale shipments being made. Tomatoes were in fairly liberal receipt and went at generally easy figures. Green Corn arrived rather freely, but desirable qualities did not lack for custom at the prevailing values. Peppers were plentiful and inclined in favor of buyers. Other vegetables in season went at much the same figures as preceding week.

Asparagus, 1/2 box.....	1 50	@ 2 25
Beans, String, 1/2 lb.....	1 1/4	@ 2 25
Beans, Lima, 1/2 lb.....	4	@ 5
Beans, Wax, 1/2 lb.....	2	@ 3
Cabbage, choice garden, 100 lbs...	35	@ 40
Cauliflower, 1/2 dozen.....	40	@ 50
Corn, Green, 1/2 sack.....	50	@ 1 00
Corn, Green, Alameda, 1/2 large crate. 1 00	@ 1 50	
Cucumbers, 1/2 small box.....	20	@ 35
Cucumbers, Bay, 1/2 large box.....	40	@ 65
Egg Plant, 1/2 box.....	65	@ 90
Garlic, 1/2 lb.....	2	@ 3
Okra, Green, 1/2 box.....	75	@ 1 00
Onions, Yellow Danver, 1/2 cental....	80	@ 95
Onions, New Cal. Red, 1/2 cental....	—	—
Peas, Sweet garden, 1/2 lb.....	2	@ 2 1/4
Peas, good to choice, 1/2 sack.....	75	@ 1 25
Peppers, Green Chile, 1/2 sack.....	50	@ 75
Peppers, Bell, 1/2 box.....	1 00	@ 1 50
Squash Summer, 1/2 small box.....	20	@ 35
Summer Squash, Bay, 1/2 large box. 1 00	@ 1 25	
Tomatoes, River, 1/2 large box.....	35	@ 60
Tomatoes, 1/2 small box.....	15	@ 25

POTATOES.

Local trade was of fair volume and at generally steady values, but shipping trade was retarded by the teamsters' strike. In consequence of the trouble experienced in shipping outward, the quantity of potatoes brought forward from producing points was much lighter than would have been the case had there been normal facilities for handling goods and moving the same by team. There was considerable inquiry for potatoes from cities in Texas and Colorado and points East so far as Chicago and Cincinnati.

Burbanks, Petaluma-Tomales, 1/2 ctl. —	@ —
Burbanks, Oregon, 1/2 cental.....	@ —
Burbanks, Sallinas, 100 lbs.....	1 00 @ 1 40
River Burbanks, in boxes, 1/2 cental. 1 00	@ 1 50
River Burbanks in sacks, 1/2 cental....	85 @ 1 30
Early Rose, 1/2 cental.....	85 @ 1 05
Mission Garnet Chile, in sacks.....	85 @ 1 10

The Fruit Market.

FRESH FRUITS.

Labor strikes have continued to interfere with the movement of fresh fruit, more especially in a wholesale way or with deliveries to canneries, and in consequence of the tie-up, heavy losses are being incurred by growers and others—in fact, by all who are interested in the fruit trade, either as producers, canners, dealers or shippers. Knowing the difficulties to be contended with, consignees requested shippers to forward sparingly for the time being, and as a result of following these instructions, there were no serious accumulations here, most of the surplus being allowed to pile up in the country or was diverted to interior canneries. Prices here were fairly well sustained, averaging in some instances slightly better than preceding week, although quotable values were without special change. Choice Cling Peaches brought tolerably stiff figures in a small way. Figs were in such light receipt as to be hardly quotable. Watermelons, Cantaloupes and Nutmegs were in liberal supply and market for these descriptions inclined in favor of consumers.

Apples, Gravenstein, 1/2 4-tier box...	1 00	@ 1 25
Apples, Red Astrachan, 1/2 50-lb. box.	50	@ 1 00
Apples, green, 1/2 small box.....	15	@ 30
Apricots, Royal, 1/2 box.....	30	@ 50
Apricots, fair to choice, 1/2 ton.....	12 50	@ 25 00
Blackberries, 1/2 chest.....	3 50	@ 5 00
Cantaloupes, 1/2 crate.....	1 25	@ 1 50
Crabapples, 1/2 small box.....	35	@ 50
Currants, 1/2 chest.....	—	—
Figs, 1-layer box, 65@90c; 2-layer....	1 50	@ 2 00
Grapes, Seedless, 1/2 crate.....	1 00	@ 1 50
Grapes, Black, 1/2 crate.....	1 00	@ 1 25
Grapes, Fontainbleau, 1/2 crate.....	75	@ 1 25
Grapes, Muscat, 1/2 crate.....	1 00	@ 1 50
Grapes, Tokay, 1/2 crate.....	1 00	@ 1 25
Logan Berries, 1/2 chest.....	5 00	@ 6 00
Nectarines, 1/2 box.....	40	@ 65
Nutmeg Melons, 1/2 crate.....	50	@ 1 25
Peaches, 1/2 box.....	30	@ 60
Pears, Bartlett's, 1/2 40-lb. box.....	75	@ 1 25
Pears, other kinds, 1/2 box.....	40	@ 65
Plums, 1/2 box.....	35	@ 60
Prunes, 1/2 box.....	40	@ 75
Raspberries, 1/2 chest.....	5 00	@ 8 00
Strawberries, Longworth, 1/2 chest....	3 50	@ 5 00
Strawberries, Large, 1/2 chest.....	3 00	@ 4 50
Watermelons, 100.....	8 00	@ 20 00
Whortleberries, 1/2 lb.....	8	@ —

DRIED FRUITS.

A decided change for the better has been developed in the market for cured and evaporated fruits, with prospects favorable for a much more profitable and satisfactory market than was experienced the past season. There has been fairly active inquiry the past week from points East for Apricots, Apples and Peaches of new crop, and for Prunes of old crop, but it has been a difficult matter in most cases

to get buyers and sellers to agree on terms, growers and handlers being firm in their views, with asking rates generally stiffer than lately current, while Eastern buyers are anxious to operate at the low figures lately in vogue. The East is in need of our dried fruits, however, and that handlers on the Atlantic side will have to bid up to secure the stock seems a foregone conclusion. Apple market is especially strong, owing to crop failure East, with Eastern values quotable up to 8 1/2c, and that figure is said to have been refused. Apricots are in good request at prevailing rates, some commanding above quotations. Apricot pits are quoted at \$10@12 per ton, and are bringing more money; sales are known to have been made at \$13 per ton. There is a demand for all the Apricot pits offering, mainly on European account. Market for new Peaches is firm at the quotations, which show an advance on figures lately current for average offerings of old. Some Prunes are going to Germany at special rates, and free sales could be made on Eastern account at same figures, but holders want full Association prices and are very likely to get same. Prune values have touched bottom and are certain to recover to some extent from the unprofitably low levels established the past season. Stocks of Prunes have been lately greatly reduced. No business has been yet reported in new Prunes, Pears or Plums. That choice Pears are almost certain to meet with a stiff market is conceded on all sides.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7	@ 7 1/4
Apricots, Royal, choice, in sacks, 1/2 lb. 8	@ 8 1/4	
Apricots, Moorpark.....	—	—
Apples, in 50-lb boxes, rings, pressed, fancy.....	6	@ —
Apples, 50-lb boxes, rings, pressed, good to choice.....	4	@ 5
Figs, White, fancy pressed.....	—	—
Nectarines, 1/2 lb.....	4	@ 5
Peaches, unpeeled, fancy.....	5 1/2	@ 5 1/2
Peaches, unpeeled, choice.....	4 1/2	@ 5
Peaches, peeled, in boxes.....	11	@ 13
Pears, unpeeled Bartlett's, halved, fancy. 5 1/2	@ 6 1/2	
Pears, halved, unpeeled Bartlett's.....	3 1/2	@ 4 1/2
Pears, quartered, unpeeled Bartlett's....	3 1/4	@ 4 1/2
Plums, Black, pitted.....	3 1/2	@ 4 1/2
Plums, White and Red.....	4 1/2	@ 5
Prunes, Silver.....	4 1/2	@ 6

COMMON SUN-DRIED.

Apricots.....	5	@ 6
Apples, sliced.....	2	@ 2 1/2
Apples, quartered.....	2	@ 3
Figs, Black.....	3	@ 3 1/2
Figs, White.....	3	@ 4
Peaches, unpeeled.....	2	@ 3
Pears, prime halves.....	2 1/2	@ 3 1/2

Prices for 1900 crop Prunes, as named by the California Cured Fruit Association: District No 3, four sizes, 3c. per lb.; 40-50s, 4 1/2c; 50-60s, 4 1/4c; 60-70s, 3 3/4c; 70-80s, 3 1/2c; 80-90s, 2 3/4c; 90-100s 2 1/4c; 100-120s, 1 1/2c; 120 up, 1 1/4c. The selling price of Prunes for District No. 1 is 1/2c. per pound less, and for District No. 2 1/4c. per pound less than for District No. 3.

RAISINS.

Not much doing in this line and no changes to record in quotable values, as officially set forth by the Growers' Association. Seeded raisins in 1-lb. cartons are now out of stock. Supplies of Sultanas and Thompson Seedless are practically exhausted, and indications are there will be very few of these the coming season.

F. O. B., CARLOAD LOTS.

Imperial Clusters, 6-crown, 1/2 20-lb box.....	3 00	@ —
Dehesa Clusters, 5-crown.....	2 50	@ —
Fancy Clusters, 4-crown.....	2 00	@ —
London Layers, 3-crown, 1/2 box.....	1 60	@ —
do 2-crown, 1/2 box.....	1 50	@ —

(Usual advance for fractions.)

Loose Muscatel, 4-crown standard, 1/2 lb.....	—	@ 7
Loose Muscatel, 3-crown.....	—	@ 6 1/2
Loose Muscatel, 2-crown standard....	—	@ 6
Loose Muscatel, seedless.....	—	@ 6 1/2

(Above prices for loose raisins are for 50-lb boxes.)

Seeded Raisins, 1-lb packages, 1/2 lb. 5 1/4	@ —	
Loose Muscatel Pacifica, 5 1/2c, 5 1/4c. and 5c. for 4, 3 and 2 crown respectively.		
Thompson Seedless.—Bleached fancy, 1/2 lb., —c; choice, 9c; standard, —c; prime, —c. Unbleached 7 1/2@9c.		

Sultanas.—Bleached fancy, 1/2 lb., —c; choice, 8 1/2c; standard, —c; prime, —c. Unbleached, 7c.		
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CITRUS FRUITS.

Offerings of oranges are now confined almost wholly to a few late Valencia's, and these are being rather stiffly held, but demand for them is not brisk. Lemons of choice to select quality are ruling in favor of sellers, but for the lower grades the market is without appreciable improvement. Limes have continued to be offered at much the same low figures as last quoted.

Oranges—Navel, 1/2 box.....	—	@ —
Seedlings, 1/2 box.....	—	@ —
Valencias, 1/2 box.....	2 75	@ 3 25
Grape Fruit, 1/2 box.....	—	@ —
Lemons—California, select, 1/2 box.....	3 00	@ —
California, good to choice.....	1 50	@ 2 50
California, common to fair.....	1 00	@ 1 75
Limes—Mexican, 1/2 box.....	5 00	@ 6 00

NUTS.

Market for Almonds and Walnuts is quiet, with values largely nominal, pending arrivals of new crop. The Almond

yield in this State will probably not exceed 200 carloads, being about 40 per cent less than last season.

California Almonds, shelled.....	18	@ 22
California Almonds, paper shell, 1/2 lb.....	12	@ 14
California Almonds, soft shell.....	10	@ 12
California Almonds, hard shell.....	6	@ 7
Peanuts, California, fair to prime.....	4 1/2	@ 5 1/2
Peanuts, Eastern, hand-picked.....	5 1/2	@ 6
Pine Nuts.....	5	@ 6

WINE.

The wholesale market for wine is very quiet, with scarcely anything offering from first hands, and not likely to be any material change in this regard until new crop becomes available. There is a decidedly firm tone to the market, and every prospect of the situation continuing favorable throughout the season to the producing and selling interest. Dry wines are quoted nominally at 22@25c. per gallon. There is a fair movement outward in bonded wines from the hands of wholesalers, going mainly overland to points East.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.....	98,884	373,367
Wheat, centals.....	73,215	416,065
Barley, centals.....	58,820	202,160
Oats, centals.....	22,080	71,421
Corn, centals.....	1,830	10,070
Rye, centals.....	500	2,495
Beans, sacks.....	1,979	4,431
Potatoes, sacks.....	32,248	90,892
Onions, sacks.....	5,375	17,902
Hay, tons.....	3,937	13,605
Wool, bales.....	1,994	5,913
Hops, bales.....	1	1

EXPORTS BY SEA.

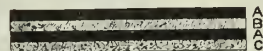
FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.....	37,040	267,940
Wheat, centals.....	62,978	365,059
Barley, centals.....	58	30,059
Oats, centals.....	—	340
Corn, centals.....	—	3,874
Beans, sacks.....	65	459
Hay, bales.....	—	110
Wool, pounds.....	—	168,700
Hops, pounds.....	1,483	13,018
Honey, cases.....	68	297
Potatoes, pack's.....	60	5,270

California Dried Fruit at New York.

NEW YORK, July 31.—Evaporated apples, common, 4 1/2 @ 7c; prime wire tray, 7 @ 7 1/2c; choice, 7 1/2 @ 8c; fancy, 8 @ 8 1/2c. California Dried Fruits.—Market is quiet, but rather firm, with values notably unchanged. Prunes, 2 1/2 @ 3 1/4c. Apricots, Royal, 8 @ 12 1/2c; Moorpark, 9 1/2 @ 14c. Peaches, unpeeled, 7 @ 10c; peeled, 11 @ 14c.

# A Good Roofing

P & B Ready Roofing is a good roofing for it's made of the best, closely woven jute canvas—thoroughly saturated with P. & B. compound and lined with heavy felt. An enlarged cut:



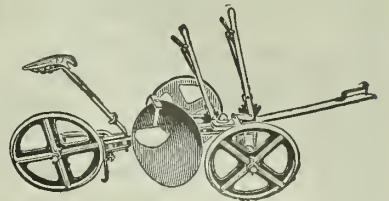
A—a P & B patent water and acid proof compound. B—thick, closely woven canvas. C—felt lining. It is ten times stronger than any other ready roofing. It cannot be torn—it's odorless and fire-resisting. Insurance companies regard it better than shingles or tar roofings. Easiest to lay. Cheapest to transport.

Send for booklet.

## Paraffine Paint Co.

116 Battery Street, San Francisco

### Rotary Disc Plows.



All the plow manufacturers have been making experiments of this style of plow, and this is evidence that they see sufficient merit in the principle of the disc plow to try to determine if they can make the plow so that it will do good work under all conditions. The Benicia Agricultural Works of Benicia, Cal., evidently have struck upon the right model, for they have placed orders to put up over 1000 of these plows for next season. From all accounts, it will be a surprise to other disc plow manufacturers, and many applications for agencies are already being made to the selling agents, Baker & Hamilton, San Francisco, Sacramento, Los Angeles.

"We make the most fencing because we make the best. The kind you want. Write American Steel & Wire Co., San Francisco, Cal."

Elgin Watches sold by jewelers everywhere in various sizes and styles. Prices to suit. Send for free booklet. Elgin National Watch Co., Elgin, Ill.

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### In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

### F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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West of Chicago. : : :  
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NURSERYMEN & TREE SEEDSMEN,  
GERMANTOWN, PHILA., PA.

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Sole Agents, - No. 123 California Street, SAN FRANCISCO, CAL.



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## CEREAL CROPS.

## An Issue Over Prison Grain Bags.

Complaints have reached the State Prison directors from various parts of the State, says the Chronicle, to the effect that farmers are unable to secure grain bags from the San Quentin jute mill, while merchants and bag dealers have plenty of prison-made bags on hand, for which they demand a higher price than that fixed by the State. It is alleged that perjury is being committed by unknown persons, in collusion with dealers, in order to circumvent the rule fixed by the prison board not to sell more than 2000 bags to any one person. The object of this rule was to prevent a corner in the bags, which are sold from  $\frac{1}{4}$  to 3 cents lower than the usual market price, according to the condition of the crops.

The farmers' side of the matter is stated clearly in the Reedley Exponent of July 11th:

There is and can be no question but that scores of people have committed perjury last year to aid others (not themselves) to get a large quantity of grain sacks from San Quentin prison. The rule of the prison is that every man obtaining sacks there must make affidavit that he is an actual grower of grain, and no one can get more than 2000 sacks on one order.

Following is the form of affidavit which must accompany each order for grain sacks:

State of California, county of..... I hereby certify that I am a farmer and grower of grain, residing in..... county, and that bags ordered above are for my own personal and individual use.

Subscribed and sworn to before me this.....day of.....1901..

(L. S.)

Notary Public.

Last February some thirty growers of Reedley and vicinity made affidavits as above and sent in their orders for sacks, together with the proper amount of money for the first payment on the sacks. Every affidavit and order was returned with the statement that the sacks could not be furnished until September 1, 1901.

Now these farmers are rather warm because they could not get these sacks at the price of 5.64 cents each, and must now pay  $7\frac{1}{2}$  to 8 cents each. But what is causing the wonderment among the actual growers of grain is the fact that merchants have plenty of San Quentin sacks for sale. The question arises, how did these merchants get possession of these sacks that actual growers of grain only are entitled to? There is no question but that perjury of the rankiest kind has been perpetrated; that scores of people who are not farmers at all have been induced through friendship to sign these orders, and that concerted action was taken to get control of San Quentin sacks.

The way the thing is done is for some one interested to get men who are not growers to sign these orders—but not before a Justice of the Peace or notary public. After a bunch of these signatures have been obtained they are carried to a notary for acknowledgment, and through friendship to the party interested he signs and seals each paper and gets his fee. This is done with the expectation that the thing will work out all right. It has done so in the past, but the end is sure to come, and greed for gain is the thing that will bring it to light, and it may come this year. Anyway, we would advise non-growers who sign these things to be more careful in the future.

WHAT ONE IN AUTHORITY SAYS.—R. M. Fitzgerald, president of the board of prison directors, discussed the situation with a Chronicle reporter, after reading the article just quoted.

"In a good season like the present," said he,

"there are from 26,000,000 to 32,000,000 bags used in California. San Quentin prison's jute mill manufactures 5,000,000 a year. It is plain that only a few of the farmers can get prison-made bags. The law provides that we shall register applications as they are received, and deliver bags in turn, without favoritism. That is what we are doing, so far as I know. If there is any favoritism it is done at the prison without the knowledge of this board.

"Some shrewd farmers are aware of the difference in price between prison-made and other bags, and get in their applications early for their pro rata—2000. No more bags are allowed to go to any person, and each person is required to give an affidavit, which is correctly quoted in the newspaper article. The affidavit certifies that the applicant intends to use these bags himself. I have heard of cases where a man got bags under this affidavit, and his crops failed, and he sold the bags. I don't see how such things as that can be prevented. But I do not believe that there is any considerable amount of trafficking in bags that come from San Quentin. In the first place, no man gets more than 2000. So, if a merchant has a large quantity on hand, it signifies that there has either been a general failure of crops in his neighborhood or that there is a conspiracy whereby purchasers of bags perjure themselves. If there are bogus affidavits being filed it is a very easy thing to unearth. A register is kept of each affidavit, with the name of the notary acknowledging it, so that the matter may be easily traced.

"Now, as to the farmers having to wait until after harvest before they could get their bags: One reason for the shortage is the immense batch of orders sent in by the Southern Pacific Milling Company, which operates down around Salinas. This company sent in several hundred affidavits, with a check for the usual 10% of the order, stating that it represented the farmers whose names were signed to the affidavits, and certifying that they were all bona fide farmers desiring the number of bags ordered. Some of them wanted 5000 each. We scaled them all down to 2000 each, according to the rule we had adopted. The total number of bags in this one batch of orders was over 2,000,000, but when scaled down it was about 900,000 bags.

"We went to the trouble of inquiring into the genuineness of these affidavits, though we were not required to do so. In every case we found that the farmer in question was actually in the business and would need the sacks he purported to have ordered. So we filled the entire order, sending the sacks to the individual farmers, and not to the milling company, which was acting merely as agent for its clients. Now, the milling people, I am told, worked up this matter in order to do business with the farmers, and there was nothing unlawful about it. It was good business enterprise. Meantime, farmers who did not get their applications in early were left in the cold. We could not help that. First come first served was the rule. These Reedley farmers, who sent in their order in February, were too late. The Salinas people I mention had their order in last October or November.

"There may be a conspiracy to gobble all the jute bags made at San Quentin through the signing of false affidavits, or through bogus acknowledgments of notaries, but I doubt it. The conspiracy would have to be very widespread in order to get the bags

at the rate of 2000 to each affidavit. Still, the affidavits are on file at the prison and may be inspected by anybody. If there is any crookedness we would like to know it."

## MISCELLANEOUS.

IN digging a ditch the use of a templet form insures correct and well finished work and an economy of labor. The templet is constructed from four pieces of 1" x 3" or 1" x 4" batten stuff. The bottom pieces made the exact length on the lower edge of the bottom width of the proposed ditch. The top piece is made the length on its bottom edge of the top width of the ditch plus the distance of the beginning of the cut from the line of the survey grade pegs. These two pieces are placed parallel and apart, the distance between bottom edges equal to the depth of the ditch cut below the grade peg line. The two sides are then firmly nailed in place on the proposed angle of slope completing the frame, the extra length of the top piece being at one side. A plumb line is then fastened to the top piece and hanging free with the top set horizontal, the point the plumb bob touches on the bottom piece is marked with a nail. Using the templet the end of the extended top piece is made to rest on the grade peg, the frame entering the ditch excavation which is not finished until the plumb bob hangs over the nail. The floor of the ditch must then be uniformly deep enough and level and the banks of the cut must have the proper slope. Care is of necessity taken that no unnecessary excavation shall be done outside of the limits of the designed dimensions.

IN building small reservoir walls out of such material as is most convenient, cobble and rock, if used, should be put on the outer slope of the dam, and not on the inside. Earth and clay should be placed on the inner face. Dump carts or scrapers can move material to place. The outside of the dam should preferably be kept highest, so that the material deposit is in wedge-shaped layers, the point being at the ground edge of the inner water face of the dam. Slopes for such dams should be inside 3 or 3  $\frac{1}{2}$  hor. to 1 vert. and outside 1  $\frac{1}{2}$  or 2 hor. to 1 vert. The surface of the ground on which the dam is to rest should be broken up first, so that the dam structure shall become incorporated with and there will be no seam for water flow. If a leak develop, it can generally be closed by dumping earth along the inside of the dam. The water leaking into the dam will carry the earth in and seal the opening. The preceding refers to dams not more than 10 or 12 feet high.

A ROUGH working rule for approximately calculating the horse power of water proposed to be used for power development is to multiply the number of inches of water flow by the height of the proposed fall divided by 400. This will give the power that can be developed on the water wheel shaft where the efficiency of the wheel is 80% or over. Thus for example with 2000 inches (50 second feet or 3000 cubic feet per minute) and a fall of 120 feet, the horse power developed would be  $2000 \times (120 \div 400) = .3 = 600$ . If it be desired to know the number of inches of water required to produce a stated H. P., the head or fall of water being given the calculation for 2000 H. P. required and 50 feet head would be  $2000 \div (50 \div 400 = .125) = 16,000$  inches (400 second feet or 24,000 cubic feet per minute). The rule lends itself to rapid mental calculations.

WHERE it is necessary to use a wrench on a polished rod or shaft, the surface should be protected by a covering of wood to receive the jaws and bite of the wrench. A block should be split and sawed out with the grain to fit the surface of the metal to be held. Bolting the two halves firmly together furnishes a good place for taking hold with a wrench. There are no marks left on the metal after removing the block.

## JERSEYS AT AUCTION!

Owing to other business I offer my entire herd of Registered Jerseys at auction, without limit or reserve, at my ranch near Compton,

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AT 10 A. M.

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TORRENCELLA'S TORMENTOR, 44115, by Oonan's Tormentor, he by Tormentor, Imp., the foundation of the celebrated Coomassie strain.  
MATILDA'S DUKE 2d, 46406, by Matilda's Duke, tracing back to Stoke Pagis, the greatest bull the world has ever known.

## AMONG THE FEMALES IN THE HERD ARE:

MATILDA'S OONAN, 119388, by Matilda's Duke out of Sigletta, test 20 lbs. 12  $\frac{1}{2}$  oz.  
SILVIA'S ETHLEEL, by Ethleel 2d's Jubilee, average record 35 lbs. 5  $\frac{1}{2}$  oz.  
VELA HASTINGS, another descendant of Oxford Kate who has a record of 39 lbs. butter in 7 days.  
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### Grain Growers Will Resort to Water Routes.

We gave the issues last week between the Colusa farmers and the railway on the cost of grain shipment. The Chronicle shows that the farmers have joined hands with a steamboat man who had a grievance also and is willing to show the railway a caper. It says that Captain Z. J. Hatch of the steamer General Frisbie has decided to aid the farmers of Colusa and other points on the upper Sacramento river to get their grain to Port Costa, something the Southern Pacific has failed to do, although its line traverses that section. Some days ago a delegation of Colusa farmers appealed in vain to the Southern Pacific officials for better facilities and more reasonable rates for transporting their grain to the Port Costa warehouses, and then went to Captain Hatch with a proposition to give them a service. He was not favorably inclined to the plan on the ground that the Vallejo business was proving quite satisfactory, and he had no desire to engage in a new enterprise.

Soon afterward the Southern Pacific advertised an excursion rate of 50 cents from Vallejo, in direct competition to the steamers General Frisbie and Monticello, whose rates were one-third higher. This aroused a retaliatory spirit in Captain Hatch, who opened negotiations with the Colusa wheat growers. The result was another visit from the farmers, who came with a pledge of \$85,000 behind them. An agreement was made whereby Hatch is to furnish two steamers and six barges for use on the river as far up as Colusa. The contract for their construction will probably be awarded to Captain Matthew Turner of Benicia. A flat rate of \$1.50 a ton for grain is to be charged from all points on the river down to Port Costa. The steamers will be fitted with oil-burning furnaces, an arrangement for the oil supply having already been made.

### A Valued Testimonial.

TO THE EDITOR:—My subscription to the PACIFIC RURAL PRESS commenced with its first issue; and I have never missed a paper in all these years. I have had the worth of my money and feel free to recommend it to every farmer in the State. I. C. STEELE.  
Pescadero.

We are gratified beyond expression at this kindly word from the honored and honorable pioneer who writes it. He was in at the beginning of our great dairy interests of California and for the last half century nearly has been prominent in all good agricultural efforts. His influence has always been exerted in behalf of sound progress in agricultural work, citizenship and manhood. We are thankful that he still lives surrounded by his descendants, strong and loyal to the lofty principles which have always actuated him. The PACIFIC RURAL PRESS points with pride to the records of its oldest and warmest friends.

There is a little business reflection suggested by the fact that Mr. Steele accompanies his kind words with a check for a new subscription—thus showing that he not only talks but works effectively for the advancement of a journal which he delights to honor.

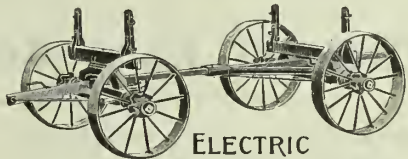
L. B. 226, Nassau, N. H., March 30, 1901.  
Dr. S. A. Tuttle, Boston, Mass.  
Dear Sir:—Will you please name me the very lowest price you will sell me one gross of your Elxir for horses, as I have used it for several years and I don't think its equal is on the market.  
Yours truly, F. A. LITTLEFIELD.

### Sulphur for Plant Diseases in Italy.

The following, bearing date of Frankfurt, June 14, 1901, has been received from Consul-General Guenther: German newspapers report that the agricultural societies of Italy will pay a prize of 1000 lire (\$193) for a reliable method of ascertaining the quality of sulphur and of mixtures of sulphur and sulphate of copper. It is pointed out that the use of sulphur against diseases of plants has increased very largely, but that very frequently the quality of the sulphur, as well as that of its mixtures with sulphate of copper, is very inferior. The prize essays must be transmitted up to March 1, 1902, to the main office of the Federazione Italiana dei Consorzi Agrari, at Piacenza. The award will be made by a special committee. Competition is entirely international.

### Farm Wagon Economy

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co. who make this Electric Handy Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low down wagon at a reasonable price.



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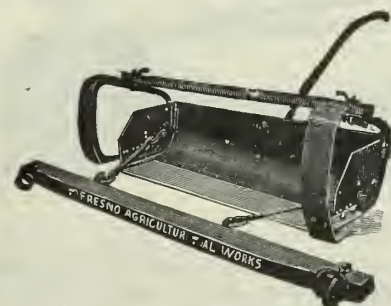
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Magnolia, Md., Jan. 17th, 1900.  
Dear Sirs:—I have used two bottles of Kendall's Spavin Cure and can say that it has given entire satisfaction; as a spavin cure it has no equal. Yours very respectfully, JAMES F. McQUADE.  
As a liniment for family use it has no equal. Price \$1; six for 5. Ask your druggist for Kendall's Spavin Cure; also "A Treatise on the Horse," the book free, or address DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

#### New Life for Arizona.

For many years Arizona has been the synonym for arid dryness. Situated on the Mexican border, in the very hottest and driest part of the so-called "arid West," its baked and dusty plains have been considered a most trying part of the trip across the continent. But relief and a new life have come to Arizona through the medium of irrigation, and great changes in the Territory are likely to result in the future. Irrigation has been practiced for some years there, but the plans now on foot are for the construction of immense storage reservoirs which will far outrank anything in the way of irrigation ever before attempted in that section. There are to be a number of them, storing enough water, it is claimed, to irrigate and reclaim over 1,000,000 acres of land which at present is desert and uninhabitable.

The United States Geological Survey has spent several years in making studies of Arizona's water supply and how it may be most advantageously used, and much of the present activity in that Territory is the result of having the detailed facts upon which projects can be based.

The largest of the schemes is the Tonto reservoir, on the headwaters of Salt river. It is proposed to build a dam in a deep canyon, 650 feet long at

the top, which will impound a body of water covering more than eighteen square miles, with an average depth of 180 feet, the cost being \$2,500,000. This will be one of the largest artificial reservoirs in the world and will hold water enough to irrigate more than 500,000 acres of land.

The soil in this country is very productive with the application of water, and the increase in available land for homes and productive agriculture in this thinly settled Territory will mean much for its future prosperity.

#### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING JULY 16, 1901.

678,546.—SPEED REGULATOR—E. N. Corson, Los Angeles, Cal.  
678,354.—BRIQUETING MACHINE—J. T. Davis, S. F.  
678,648.—SAW SET—C. L. Driefer, S. F.  
678,562.—DRAWING BOARD—O. Haskell, San Rafael, Cal.  
678,618.—PLOW—W. K. Hobson, Santa Maria, Cal.  
678,621.—FURNACE—Hynes & Bert, Los Angeles, Cal.  
678,849.—CULTIVATOR—T. J. Hubbell, Watsonville, Cal.  
678,494.—CAN HEADING MACHINE—W. T. Jones, S. F.  
678,793.—CONCENTRATOR—L. Look, Los Angeles, Cal.  
678,679.—TREE PROP BRACKET—R. S. McIntyre, Riverside, Cal.  
678,796.—TURNING TOOL—F. L. Stearns, Los Angeles, Cal.  
678,526.—GOLD SAVING APPARATUS—C. P. Stewart, Oakland, Cal.  
678,819.—ORE SEPARATOR—C. V. Watkins, Vinegar's Landing, Wash.  
678,603.—SEWING MACHINE—S. B. Wickersham, Phoenix, Ariz.

The report sent out by Frank H. Hitchcock, the chief of the foreign market section of the Department of Agriculture, shows that of agricultural products the United States sent last year \$408,000,000 worth to the United Kingdom and \$134,000,000 worth to Germany, while the Netherlands took \$52,000,000 worth, France \$45,000,000 worth, Belgium \$33,000,000 worth, Italy \$24,000,000, Canada \$21,000,000, Japan over \$15,000,000 and

Denmark nearly \$15,000,000, Cuba \$14,000,000, or \$10,000,000 more than in 1896, Spain \$10,500,000, British South Africa over \$10,000,000 worth. Thus twelve countries exceeded \$10,000,000 worth each. Cuba, Porto Rico, Hawaii and the Philippine Islands together exceeded \$20,000,000 worth, against \$6,200,000 in 1896, and Asia increased from \$5,735,000 in 1896 to nearly \$23,000,000 in 1900. The total of agricultural products exported amounts to \$739,000,000, which exceeds all records excepting 1898, when they reached \$762,000,000. The ten principal articles, as reported, included for 1900, breadstuffs \$262,744,000, cotton \$242,988,978, meat products \$173,751,471, live animals \$43,585,031, tobacco \$29,422,371, oil cake and oil cake meal

\$16,806,302, vegetable oils \$16,345,656, fruits and nuts \$11,642,662, dairy products \$9,226,520, seeds \$7,036,982.

#### Leg and Body Wash.



Race horses often become sore and stiff from continued strain on the hard tracks. Nothing takes out this stiffness and soreness like a wash compounded of diluted

#### Tuttle's Elixir

apply to the legs and put on light bandages. Sponge the body and put on light blanket. Guaranteed to produce desired results or money back.

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Dr. S. A. Tuttle, V. S.  
Dear Sir:—I have used your Elixir for the past ten years, in the diluted form for a leg and body wash. I consider it the best wash for keeping horses from soiling up. Horses done up with this wash are much less liable to take cold than when done up with witch hazel or any other wash I ever used.  
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Avoid all blisters; they offer only temporary relief if any.

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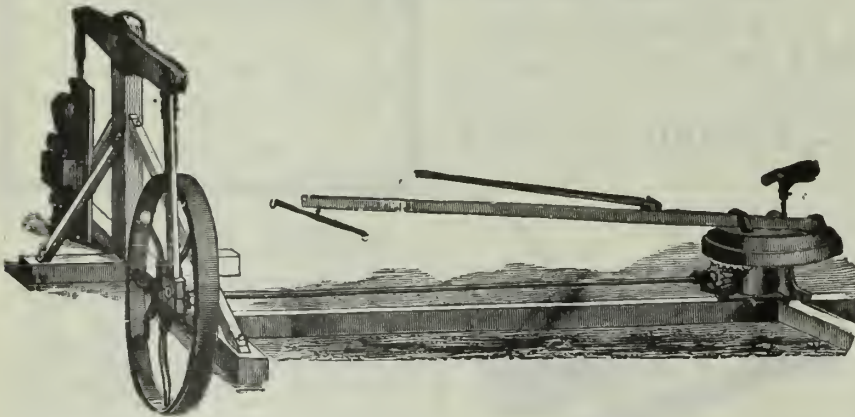
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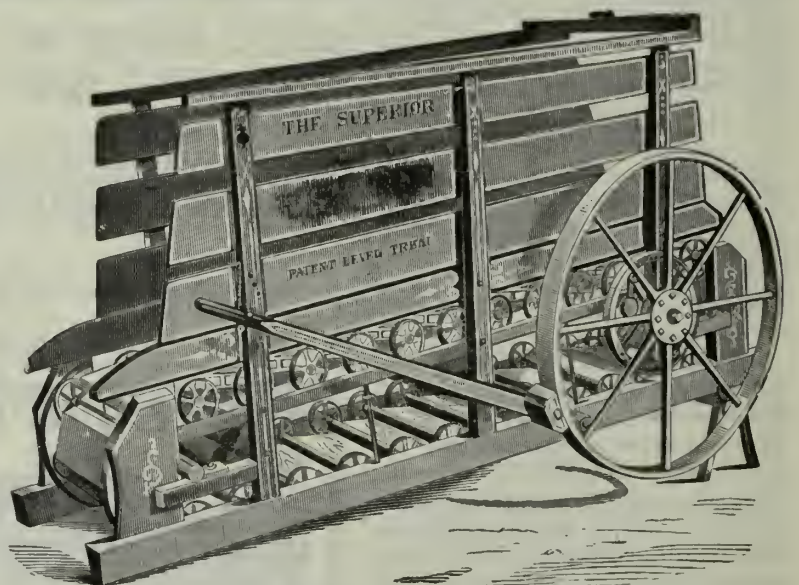


THE ECONOMY One-Sweep Horse Power, with Fly Wheel and Walking Beam, can be furnished with any kind of pump required. The Upright is 6½ feet high. The Fly Wheels have 4-inch face and can be used as belt pulleys. The Crank is adjustable; stroke from 4 to 18 inches. A Fly Wheel should always be used with a Horse Power intended for pumping, as it gives a steady motion, necessary for good pumping.

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## Showing Fruit at the Pan-American.

Supt. F. W. Taylor of the fruit department of the Buffalo fair writes to Orange Judd Farmer about cold storage and other matters connected with showing fruits at this exposition. The account may be suggestive to our readers who are preparing for this year's fairs.

The pomological exhibits of all former expositions have consisted almost entirely at first of preserved and processed fruits. Such exhibits possess much merit, and they keep the space well covered until fresh fruits are available. At the Pan-American it was desired that every State should show examples of such fruits as may be kept in good condition by the use of artificial refrigeration until after the season of the opening, or during the months of May, June and July. The use of ammonia refrigeration has, for the most part, grown up so far as its practical application to preserving fruit from decay is concerned, since the World's Columbian Exposition was held.

It seemed necessary, therefore, to get all the facts possible before those who might have fruit of the crop of 1900, which they could keep over for the opening weeks of the exposition. To reach this end a circular was prepared which gave such practical reports of results that had been produced and could be expected to follow, as would enable intelligent plans to be laid with regard to the handling of the fruits that might be desired held for 1901. This circular was sent to the members of all the leading horticultural societies.

**LAST YEAR'S APPLES.**—Acting either independently or following the lines laid down in the circular, several carloads of apples were placed in storage by various States, some at home and some in Buffalo, ready for use in the earlier weeks of the exposition. The result of this forethought and foresight has been most noticeably apparent. Certainly no exposition has ever, in May and June, shown such splendid fruits in such great abundance during what is usually an "off" portion of the season.

The States participating in the apple exhibits, showing the crop of 1900, have been New York, which exhibited 358 varieties, the largest number, Illinois, Missouri, Ontario, Oregon, Michigan, Connecticut, Maine, Virginia, Minnesota. The varieties most noticeable by reason of their plentifulness have been Esopus Spitzenberg, Yellow Bell, Lady, Ben Davis, Wine Sap, Jonathan, York Imperial, Newtown and Baldwin. The characteristics of the varieties frequently change as they pass through storage and are opened and placed in the open air. Some varieties which come out in apparently excellent condition last only a few hours or days, while others will endure even in the heat and dust of an exposition, in good form and flavor for two weeks or longer. This is one of the most important characteristics to be studied and recorded, and is to be worked out and made the subject of a report later.

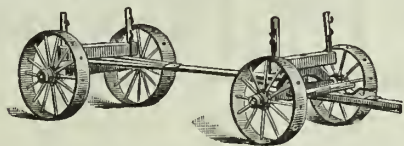
**SHOWING FRUIT.**—The method of installation is also a fruitful theme for discussion and disagreement. The two

systems may be designated as pyramidal and flat. In showing fresh fruits of all sorts, no method can give the appearance of enormous mass and splendid color as can the flat. Tables built uniformly 30 feet in height, painted white, slightly tinted with cream, covered with white plates bearing the splendid specimens of winter apples, Catawba grapes and pears, are more effective than any other possible kind of installation. For jars of processed or preserved fruits, pyramidal installation is usually effective and satisfactory. The Illinois exhibit produces good effects here, as was done at Chicago and at Omaha, by receding, stair-shape shelving with the risers covered by mirrors. This has been facetiously called the barroom style, referring to the lavish use of mirrors, but the many favorable comments indicate that it is attractive to a great number of visitors.

The building in which the fruit exhibits are placed is thoroughly well adapted to its use, being the most lofty of any built for exhibits. The lighting is generous, so that it has been possible to use sufficiently heavy paint on all glass in roof and sides to exclude the direct sun's rays and at the same time leave plenty of light for the day, while the electric lights have been figured on the same basis as is used in printing houses for night work. The windows have all been painted with a fairly heavy coat of white paint with an admixture of sufficient greenish tinge. The result is the coolest and most comfortable building that could be devised. As the season advances, small fruits appear, to be followed by larger ones, varieties and kinds later. It is doubtful whether the coming months will present attractions that will indicate more forethought and careful planning than did the splendid tables of apples, with a sprinkling of pears and grapes, placed before the public during May and June.

## Farm Wagon only \$21.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30-inch wheels with 4-inch tire, and sold for only \$21.95.



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## California Vegetables

IN

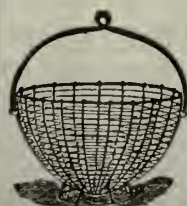
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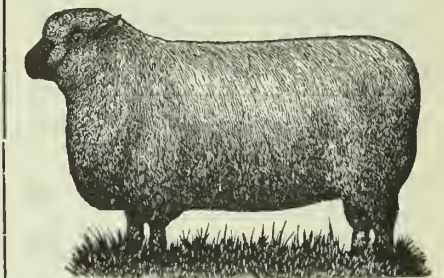
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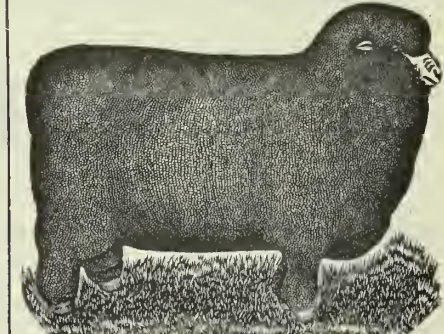
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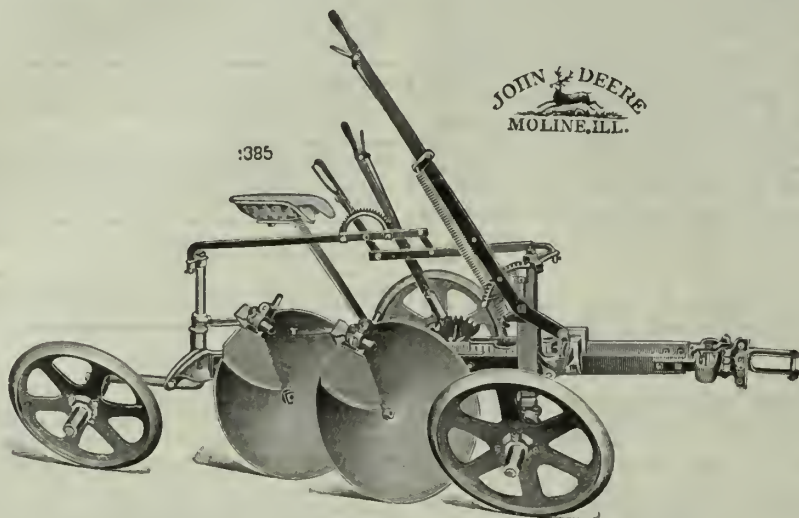


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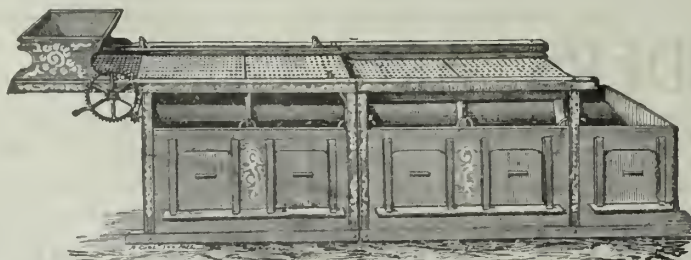
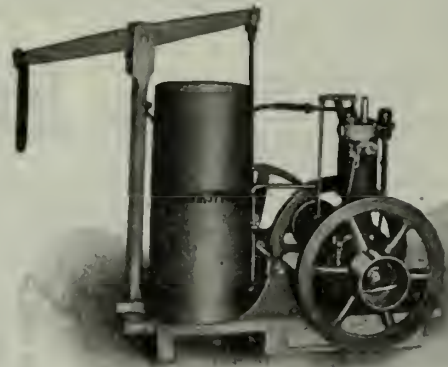
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 6.

SAN FRANCISCO, SATURDAY, AUGUST 10, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Pest Fending at San Francisco.

It has proved very fortunate that the State Board of Horticulture saw so early the importance of guarding our fruit interests from introduction of new pests and diseases through the port of San Francisco. It has also proved fortunate that during all these years Mr. Alexander Craw has been kept upon the horticultural watch tower because he has shown a keenness in the detection of danger and resoluteness in excluding it, both of which have accomplished incalculable good for the State. The reports of Mr. Craw, which have appeared in our columns, have kept our readers informed of the progress of the work, and we allude to it now to call wider attention to the effectual barrier which is maintained here for the protection of our horticulture. The report of the State Board of Horticulture for 1899-1900, which is just issuing from the State printer, has interesting facts about the quarantine operations at this port. Most readers are probably unaware that much of the tropical fruit received at our wharves has to go through hydrocyanic gas fumigation before it is permitted to go upon sale. This is to kill the pests which may be upon its surfaces or attached stems or foliage. The picture on this page shows two of the small houses maintained on the wharves to subject imported fruit to such treatment. They are made gas-tight and the contents speedily cleansed of all animal life. The process does not injure the fruit, but it does render it innocuous. Not all fruits are treated; for instance, bananas are not fumigated, but pineapples are. How busy Mr. Craw and his assistants must be with cleansing importations can be shown by a few figures from his last report. From the beginning of the present year to April, last they found trees, plants or fruit on ninety-five steamships and sailing vessels from foreign countries, and also from the Hawaiian and Philippine islands. The receipts consisted of 369 cases, boxes and bales of trees and plants; 97 loose lots of plants, numbering from one to a dozen in each lot; 10,386 boxes of citrus fruits, principally limes and Japanese oranges; 2848 boxes of miscellaneous fruits; 7373 boxes of tomatoes from Mexico and Honolulu; 5598 crates and sacks of onions from Australia. The above were carefully examined, and, when found infested with insects or diseases not already in the State, were destroyed; when necessary, all other stock has been fumigated with hydrocyanic acid gas.

The work of Mr. Craw's office has constantly increased during recent years. The stimulation of ocean traffic, the establishment of new steamship lines, the multiplication of tourists bringing all sorts of plants and pest animals—all these have necessitated increased watchfulness and quick action.

At present two importations to the State by rail are under control. In the case of fruits and plants

arriving by rail, the office in this city is notified by the railroad company of such arrivals, and arrangements are made with the county commissioners, or with a special agent from the central office, to personally inspect the same. In this way importations are inspected before delivery to the consignee, and, when infested with any pest, are either destroyed or fumigated according to the character of the pest

matter to the attention of the Postmaster-general, and it has been arranged that all mail matter containing fruits or plants from Hawaii or the Philippines is sent to the postmaster at the capital of each of the Pacific Coast States, and by him submitted for examination to the State Board of Horticulture. All such packages when found to contain no dangerous insects are promptly forwarded to the addressee.

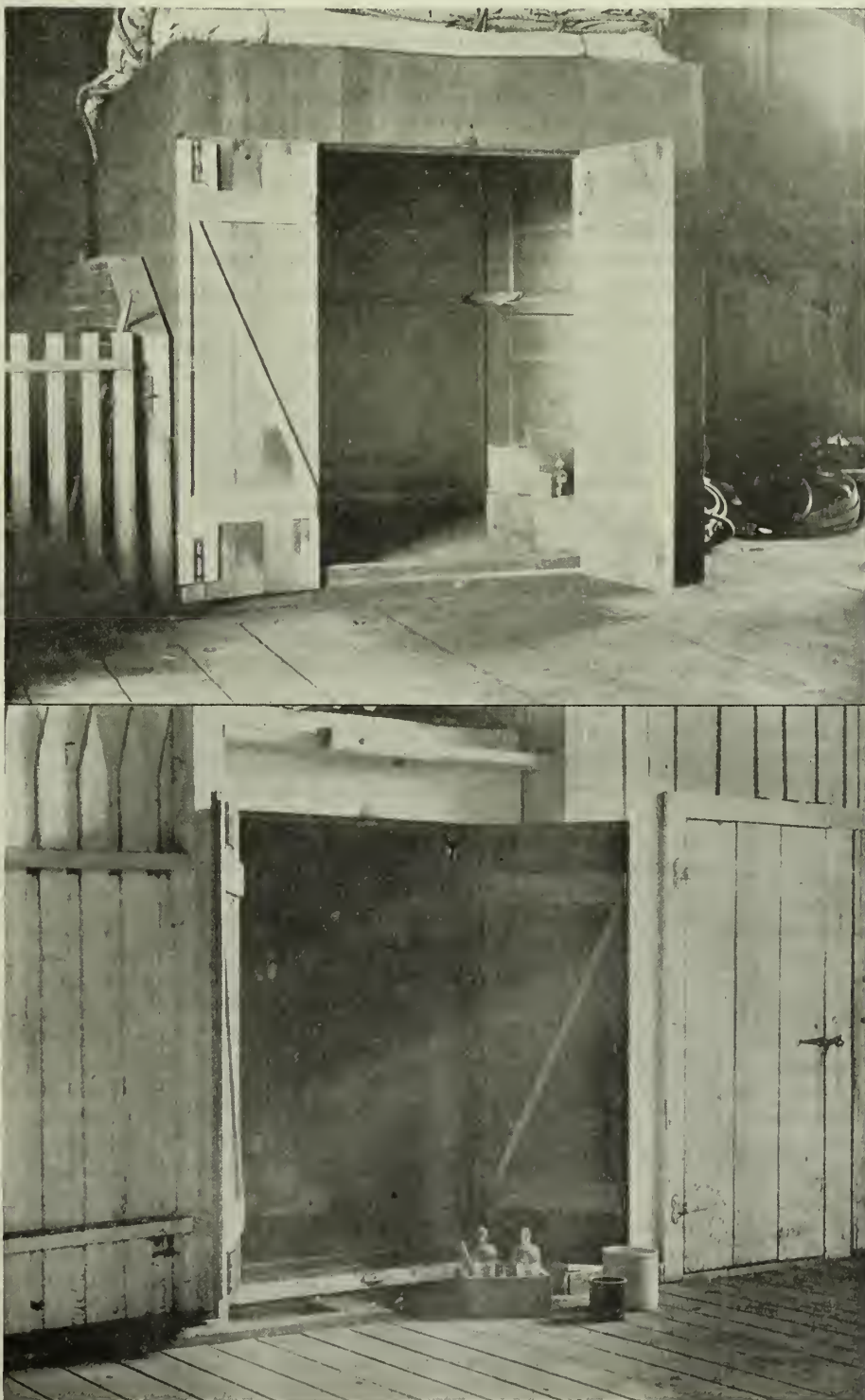
When any package contains infected fruit or plants, the postmaster notifies the addressee and detains the same until the State Board or commissioner can arrange with the addressee, or take such other proceeding as may be proper for the destruction thereof.

All this work is constantly going on so quietly and systematically that only those who are touched by it are aware of its progress, and yet it stands as a stalwart safeguard for the protection of our growing plants against new destructive agencies. We are learning how to cope with many of the evils we now have; others still defy treatment, but it is of the utmost importance that the situation may not be rendered more difficult by constant introduction of new evils. Mr. Craw's office now stands as a protection against them.

THE French farmers must be getting somewhat saucy, for we read in a cable dispatch from Lille, France, that a vast congress was being held attended by delegates from all the northern parts of France, to "protest against recent governmental measures threatening the agricultural and manufacturing interests of the north." Six thousand representatives were present to protest against increased tax on alcohol and other threatened government proposals. The farmers are probably producers of the raw material from which the alcohol is made. Six thousand delegates are a good many. We do not know how it will strike the government people in France; but if so many American farmers could get together on any proposition, Uncle Samuel would come to the front of the platform and propose three cheers for anything they mentioned. The trouble always is to get them together on any proposition. They have something to learn from France.

It is telegraphed from Tacoma that State Grain Inspector Wright, who has just returned from a trip

through the Northwest wheat belt, declares the yield will be unprecedented, Washington alone yielding 32,000,000 bushels. The labor question, which was a serious one two weeks ago, has materially cleared, through the number of men who have entered the wheat districts from the mining regions, especially from British Columbia, where strikes have thrown men out of employment. Combined harvesting machines have also simplified the labor question. The yield of wheat throughout the Northwest is higher than ever before, and increased acreage will make the crop an unusually large one.



Rooms on San Francisco Wharves for the Fumigation of Imported Fruits.

discovered. Until recently the importation of plants by mail proceeded freely without inspection. The quarantine system could not be perfect while there was a chance of shipping infected stock through the mails, and in view of the American occupation of the Hawaiian and Philippine islands, and the heavy mail now passing between California and those islands, there was a constant danger that some of the very many pests with which they are infested, and from which we are free, might find their way into our State in this manner.

The State Board of Horticulture brought the



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E. J. WICKSON..... Horticultural Editor.

San Francisco, August 10, 1901.

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## The Week.

The labor troubles still remain to vex the producer, who has the fruits of his year's effort to market, and to take from him even the enjoyment of the sunshine of these delightful days. The farmer cannot understand by what right he is made to suffer for quarrels among those who live by his labor and to all of whom he pays toll. Nor can he be blamed for inability to recognize "rights" which are to him flagrant wrongs, against which he should be adequately protected. This situation of affairs is now touching our agriculture at many points, and if there is no remedy now available there should be one provided at the earliest possible moment. Food supplies should have a clear right of way; possibly some other things can be made sport of with less glory.

Wheat futures are rather stiff; they have been somewhat unsettled from day to day, but the average is better than the previous week. Spot is at a standstill. The Port Costa strike prevents loading ships and prices remain nominally the same. A German steamer took some wheat for Peru and barley for Liverpool, otherwise exports are held up. Southern California barley growers are inquiring for overland rates, but no movement eastward is yet noted. Spot barley is unchanged and nothing is doing in futures. Oats are quiet; the Government has asked for bids, having rejected all recently made at the north. Corn is scarce and unquotable. Shippers are buying a little rye at low prices but they cannot move it. Beans are firm and in the main higher, owing to Eastern demand. There has been a report current of 3000 sacks of German beans being sold at this port, but it seems that a German steamer with such a cargo went straight through to Nome. Bran is scarce and high and middlings are in such request that low-grade flour is going as middlings. Hay is very quiet and dragging with small sales and slow arrivals. Meats are unchanged; hogs are arriving more freely, but are not lower yet. Butter and cheese are all higher. Butter and eggs are said to be bolstered up to help stocks out of storage. Poultry is slow, more Eastern is arriving and the market is easier, especially for old birds. Potatoes are quickly taken. There is a demand from the whole country from Boston to Idaho. There seems to be a terrible shortage of potatoes, some saying even to a reduction of 75% of the usual crop, but that is probably overdrawn. Onions are better. Considering conditions, fruit is doing well. Cannerymen are managing to get their sup-

plies through, and they are very active. Lemons are strong and oranges are going high. The dried fruit market is strong and active, and buyers are taking offers right and left at higher prices. Almonds have sold fairly well in the interior, but walnut prices are not yet fixed. A lot of honey has gone by steamer to Germany; holders expect higher prices. The hop market is firm, but all are awaiting developments. Desirable wool is well cleaned up and the market is firm, taking some San Joaquin fall clip at comparatively good rates.

The way in which the most distant sections of the country are calling for supplies of staple vegetables from this coast is something the prophet of a score of years ago would not have dared speak for fear of being laughed to shame. It looks now as though California might have to starve herself even from potatoes and cabbage because the East needs them so greatly. This truck farming is reaching out wonderfully and the present facts will give particular interest to a publication promised soon by the Agricultural Department in the form of an exhaustive report by E. D. Ward and Edwin S. Holmes on truck farming and the transportation of fruits and vegetables in the United States. California's work will be duly noted. The report will say: "Such a thing as a particular season for any kind of vegetable in our principal markets is at this time practically unknown, and it is now possible to draw upon the different sections of the country and receive at any season of the year nearly all the standard varieties of vegetables." California growers can find great opportunity in development of her winter-grown vegetable resources.

We expect to have for our next issue a detailed statement of the arrangements for the dairy school at the State University this fall. This is a matter which has been long expected and should be warmly welcomed. There will be courses of lectures and practical demonstrations, beginning Oct. 9 and ending Dec. 12, covering the science and practice of butter and cheesemaking. The course is open to anyone over 17 years of age having a common-school education. The school is under special charge of Mr. Leroy Anderson, dairy instructor, and other instructors will be Profs. E. J. Wickson and M. E. Jaffa, Dr. A. R. Ward and C. C. Major. A full outfit of creamery apparatus will be provided and the pupils will get into the milk up to their ears.

We alluded last week to the work of the trolley car in promoting agriculture in the East, and bespoke its agency in our foothills to a greater extent than at present. What they now propose at Santa Cruz is fresh in that line, which is to build an electric railway from Santa Cruz to Watsonville, with branches to Capitola and Corralitos. It is proposed to haul fruit from the Pajaro valley to Santa Cruz, where the fruit may be placed on vessels and carried to seaboard markets. Eastern capitalists are behind the project. It is estimated that 500 H. P. will be furnished by the Big Creek Power Co., which has recently improved its water supply and electrical equipment. This is the way to do it. Let the falling water carry the products to the rolling water. We do not have any appreciative idea of the importance of our water power and waterways. There is room for scores of enterprises like that mooted at Santa Cruz. Up and at them!

Prune affairs are very lively and it looks as though there might be as much too few prunes this year as there were too many last year. The Association from San Jose is reporting sales in great amounts. Just after the large transactions in small prunes, which we noted last week, there was a sale of twenty-five cars, and options given on additional cars. These are all large sizes and brought 3 cents and upward, according to sizes. The officers state that a dividend of \$350,000 will be declared within a few days, and that the character of the present sales and inquiries gives assurance that the old crop will be disposed of before the new crop is cured. The fruit remaining unsold is valued at \$1,000,000. This turn of affairs ought to make some people sorry that they allowed the prune orchards to go to grass this summer. Prune trees are not the worst thing in the world to have, if they are properly taken care of; but some are going to be short of a crop next year as a penalty for this year's neglect. We need more courage and more patience.

## QUERIES AND REPLIES.

### Ladybugs and Woolly Aphis.

TO THE EDITOR:—Where can I obtain those ladybugs you recommend for exterminating woolly aphis? I have tried everything that you or anyone else has recommended for the past five years, but without success. My apple trees are dying by the hundred; even the old trees are succumbing to the effects of aphis. Is this the proper time to place the ladybugs in the orchard? I understand from those here that have used ladybugs for scale that they disappear without doing much good.—M. G. COGGERSHALL, Trask.

The ladybugs which do the most work on the woolly aphis are several common native species—yellowish red, bright red, red with black spots, black with two red spots, besides some smaller, grayish and black members of the same large group, which are less conspicuous. The large reds and yellowish reds are the most abundant. They are usually abundant everywhere, and can sometimes be found by the pailful as they collect for protection or social purposes on hedges, corn stalks, etc. Recently, below Watsonville, large quantities were found in the shrubbery near the river bank, and are reported to have been sold by the quart to the apple orchardists. No one takes pains to breed these insects because they are so common. Other species have been introduced, but so far as we know they have not made any local record yet. All these beneficial insects work on the aphis on the tree; but, as stated in last week's PACIFIC RURAL PRESS, it is the root form of this insect which must be destroyed or circumvented, if its worst work is to be overcome. Still, the insects which clean the tree are of great value. In New Zealand, where they use resistant roots, as we shall soon be doing in California, they find that the work of the aphis on the tree is now commanding their attention, and they need resistant tops as well as resistant roots, because, they say, they are short of aphis-eating ladybugs. We could probably do very well with resistant roots, because we have so many ladybugs which will work on the tree.

As for trees dying from woolly aphis, probably the soil or climatic conditions are trying to the apple. The apple under hardship will yield to the aphis much sooner than the apple which is otherwise comfortable and thrifty.

### Growing Apricots.

TO THE EDITOR:—I am told by an old resident of this place that the best way to plant an apricot tree is to plant a bitter almond (getting a natural root where I want the apricot to be), and then graft the apricot on the almond. Do you so advise? Where an apricot tree is hurt by sour sap, cutting down its yield one-half and ripening that prematurely, is there any hope of saving the tree? Does it pay to try?—E. S. WILLIAMS, Saratoga.

What you mention as the best way to grow an apricot tree is the worst known to us, from the fact that the apricot is altogether untrustworthy on the almond root and is liable to break off suddenly, even after it attains considerable growth. Never grow the apricot on the almond. As for planting any pit in place in the proposed orchard and then grafting or budding into it, it is the old tap root question, which we consider of no importance whatever. The extra cost of growing trees that way and the irregularity which comes from grafting in the orchard are unnecessary burdens. The trees should be grown in the nursery and the removal of part of the roots at transplanting is of no moment whatever, for the tree rapidly restores its root system, penetrating deeply with several tap roots instead of one. The apricot tree suffering from sour sap, as you describe, will probably die before the end of the season. Cutting back, removing the fruit, etc., earlier in the season, when it was first seen to be affected, would perhaps have enabled it to restore itself, but it is probably now beyond remedy. If you wish to experiment with it cut back a part of the branches and give it irrigation, unless you find on digging down that the soil is too moist to require it.

### Scales on House Plants.

TO THE EDITOR:—Will you please advise through the columns of the PACIFIC RURAL PRESS what to do to house plants to rid them of a small white scale, which grows no larger than a pinhead. Plants do not always recover from wholesale decapitation, nor is it feasible to clean asparagus sprengesi or the



Boston sword fern by hand picking—especially with a large specimen.—**AGRICOLA**, Napa.

Hydrocyanic acid gas, which is used for fumigation of citrus trees at the south and for treatment of imported plants and fruits at this port is available; also for treatment of house plants if placed in tight receptacles and the gas generated by pouring sulphuric acid on cyanide of potassium. This must be done with exact amounts according to the space included in the receptacle, as can be learned by sending to the University of California, Berkeley, for their bulletin on fumigation. The acid and the cyanide are, however, so violently dangerous that we can hardly commend them for house use. The use of whale oil soap, one-quarter of a pound to the gallon, accompanied by picking and brushing of the foliage is our own method with a few plants and it is safe if it is tiresome.

Grafting or Starting from Cuttings.

To THE EDITOR:—Kindly inform me in your valuable paper what to do with 2000 resistant vines (two years old) that I have, of which this is a sample. Some say that it will cost more and take longer to graft these vines than it would to plant new ones, and then they claim the resistant will last no longer. Can you tell what kind they are?—**C. F. SEITZ**, Healdsburg.

It is impossible to recognize the variety from the specimen; at least it did not have characteristic marks enough to be sure about it. It does not, however, seem to be one of the chiefly grown resistants. If it is a kind of resistant which does not resist, and there are some of that kind, there would not be reason to expect much of it, but as to whether a good resistant will not endure phylloxera longer than a common vinifera, there cannot be a question among intelligent people. If you intend to raise the question as to whether these apparently vigorous roots are of more or less value than new cuttings, we reply that they certainly are of more value, and this should be made use of by grafting.

Prune Dipping.

To THE EDITOR:—I am told by one who says he knows, that better results may be obtained in dipping prunes, not to rinse them in water, as in so doing much of the sugar is lost, and that the lye remaining after thoroughly draining will be beneficial, rather than otherwise, in curing and preserving the fruit.—**NEW SUBSCRIBER**, Sacramento county.

Such a proposition is new to us. Dipping is for the purpose of cleansing the fruit and thinning the skin. The dipping should be done at once and quickly, and the cleansing water frequently changed. When properly done neither the dipping nor the rinsing reaches the sugar to any appreciable extent, and the lye serves no purpose in curing except in opening the pulp to the process of evaporation by its action on the skin. If anyone has found out that rinsing can be profitably dispensed with we shall be glad to know it.

Tomatoes Continuously.

To THE EDITOR:—My experience this year is that tomatoes planted on ground used the last two years show less signs of "drying up" than those on ground used for tomatoes the first time.—**THOMAS YOST**, Kings river.

It is impossible to make any wise comment on this statement without knowing more of the conditions involved. If by "drying up" you mean the blight, the fact is difficult of understanding, because the germs ought to multiply and the trouble should become worse. If, however, you chance to have used a somewhat resistant variety on the old ground the phenomenon might be explained. If you mean simply drying up, the plants on the old land might be doing better because the soil has possibly had better cultivation for several years than the other and is therefore in better condition. The reason for the bare fact above is a good thing to guess at, but not very satisfactory to account for.

The Pomelo Proposition.

To THE EDITOR:—I purchased the best pomelo trees I could find in 1897, two acres of Seedless and two acres of Leonardy. My trees grew finely, but when my first crop last winter was at hand I could find no good sale for it, and had to pay freight bills for a lot I shipped to Philadelphia. Scobel & Day of New York wrote me that the Florida pomelos had the preference and California stock could not be sold to advantage. I have had my two acres of Leonardy budded to Washington Navels but shall keep the Seedless; believing that the pomelo is one of our best

and most wholesome fruits. I shall value any suggestions you may make in this line. I am well pleased with your paper.—**E. I. GALVIN**, Sacramento.

What you say about your pomelo experience is very interesting, although not very encouraging. Other growers seem to be passing through the same line of experience and pomelo trees everywhere have been freely worked over to Washington Navels. There is, however, a chance to demonstrate to Eastern consumers that California pomelos of an acceptable variety are desirable and some growers in southern California are strong in this belief. It is a proposition which may be long in working out, and Florida certainly has a notable advantage at present and can hold it against us by increasing her product from plantations in parts of the State which are practically frost free. Any producer who undertakes to overcome a strong market preference has a hard road and a long road, though he may get there. Personally we prefer a palace car on a scenic route and the Washington Navel seems now to be that sort of an outfit.

Aphis on Willow—Whitewash for Fruit Trees.

To THE EDITOR:—I send a small box containing a piece of limb off of a willow tree covered with some kind of a bug. Will you please give me a remedy to get rid of them and inform me what kind of a bug it is? Also, please give a recipe for making whitewash for apricot trees.—**A SUBSCRIBER**, San Jose.

The willow has a plant louse or aphis. Spray with kerosene emulsion or any of the patented medicines which are safe for living plants. These insects are very easy to kill if you hit them with any wash—even plentiful drenching with cold water will discourage them.

Any good whitewash will do to protect trees from sunburn. Several good recipes were given in the **PACIFIC RURAL PRESS** of June 15. If you want an insecticidal whitewash, use the lime, salt and sulphur formula in the winter time, with an excess of lime to secure whiteness.

Soft Orange Scale.

To THE EDITOR:—Find enclosed leaf from orange tree infested with something unknown to me. What is it? Is it injurious to the tree and fruit, and, if so, what is the remedy?—**GEORGE J. HATCHER**.

It is the soft orange scale, discussed in the answers to Mr. Galvin's questions in last week's **PACIFIC RURAL PRESS**. In your case, however, the insects are few and in rather poor health. Unless they get more numerous than this specimen shows, it will not be necessary to spray them, for probably their enemies will keep them in check.

What About the Sugar Prune?

To THE EDITOR:—What is the present status of the Sugar prune? Is it as hardy and prolific as the French prune? Has the Sugar prune been tested long enough to know what it will do under different climatic conditions in California? Would it be desirable to work the Sugar prune on my apricots instead of the French?—**J. O. STEWART**, Danville.

We do not know enough about the Sugar prune yet to be sure on these points. How is it behaving this season, and who has experience enough to prompt him to give judgment on it so far as tried? It is time this information was coming in, and we shall be glad to hear from all readers.

Peaches on Plum.

To THE EDITOR:—Will you kindly inform me whether or not I can successfully and profitably graft peaches or apricots into Tragedy prunes; also whether I can graft them into Bulgarian prunes successfully. I have about 200 Tragedy prunes on Myrobolan stock, and about 200 Bulgarian prunes, which I wish to graft into some profitable fruit.—**FLORIN BRANN**.

We are shy about advising working either peach or apricot into these plum stocks. In our own work we should choose some other plum or prune for grafting in. We have expressed this opinion several times. It may be wrong, but no one has protested so far. If any one finds such grafts satisfactory on the whole, please give us the experience.

Do Squirrels Drink Water?

To THE EDITOR:—I want to know if squirrels drink water. I have asked several experts and cannot get an answer.—**H. P.**, San Francisco.

We do not know. Probably some reader who is up in squirrelology can answer from observation.

California Poultry Book,

To THE EDITOR:—Could you please tell me where I can get a good reliable California book on practical raising and feeding poultry?—**AMATEUR**, Morgan Hill.

There is no such book. The best you can do is to get an Eastern book like "Stoddard's Egg Farm" and read it in the light of the ample local experience which is described in the columns of the **PACIFIC RURAL PRESS**. The latest general account of poultry feeding from a California point of view is to be found in a pamphlet on live-stock feeding just issued, which can be had free by application to the Agricultural Experiment Station at Berkeley.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending August 5, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

High temperatures have continued during the week. Light rain has fallen in the foothills. In some places the precipitation was sufficient to extinguish the brush and grass fires, but caused no injury to crops. The extremely hot weather has caused a rapid growth of hops and they will mature earlier than usual. So far as reported there has been no injury to grapes by the heat, probably owing to the heavy foliage of the vines. Heavy shipments of fruit are being made from Sacramento. Citrus fruits are in excellent condition and will probably yield heavy crops. Harvesting is still in progress and will continue for about two weeks in some sections. Wheat and barley are yielding large crops and the quality of the grain is excellent. The hay crop is light in portions of Butte county.

COAST AND BAY SECTIONS.

Continued warm weather during the week has been favorable for crops. Light showers of rain have fallen in some sections and fogs have prevailed along the coast. Grain harvest and threshing are progressing rapidly. Wheat and barley are of excellent quality and in some places the yield is very heavy. Corn, hops and beans are doing well and will yield fair crops, while in other places the yield will be very light. Fruit shipments have been seriously interfered with during the week and there will probably be a considerable loss to orchardists. Citrus fruits are in good condition.

SAN JOAQUIN VALLEY.

Very warm and somewhat sultry weather prevailed during the week, with a light sprinkle of rain in most sections Wednesday, too light to do damage. The grain harvest is progressing rapidly and in most sections is nearly or quite completed. Deciduous fruits are ripening and in most sections the crop is good and the quality excellent. Peaches and pears are being handled in large quantities by the canneries. Large shipments of green fruit are being made to Eastern points and of melons to the Northwest. Grapes are making good progress and early varieties are being marketed. Alfalfa is doing well and in some localities the fourth crop is being harvested. Stock of all kinds are in good condition.

SOUTHERN CALIFORNIA.

The weather has been generally clear and hot during the week, with light showers in some sections and fogs along the coast. In some places orange trees are putting out a second set of blossoms and the small oranges are falling. There will be a light crop in the vicinity of Pomona. Walnuts are reported in excellent condition in Ventura county, but are dropping badly in some orchards in Orange county. Peaches will yield a fair crop in some sections. Grapes are in excellent condition. Beets and beans are doing well and in some places will yield excellent crops. There is a fair yield of mustard in Santa Barbara county. The potato crop is about average. Barley and oats are yielding fair crops, but wheat is light.

EUREKA SUMMARY.—Fogs were of some benefit to growing crops, but on high lands vegetation is parched and needs rain badly. Apples are ripening rapidly; some are on market. Reapers are at work in the grain fields.

LOS ANGELES SUMMARY.—Heavy rain in eastern mountains and valleys Sunday. Apricot drying about over; yield better than expected. Early peaches are ripening rapidly.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, August 7, 1901, are from official sources and are furnished by the United States Weather Bureau for the **PACIFIC RURAL PRESS**:

CALIFORNIA STATIONS.	Total Rainfall for the Week	Total Seasonal Rainfall to Date	Total Seasonal Rainfall Last Year to Same Date	Average Seasonal Rainfall to Date	Maximum Temperature for the Week	Minimum Temperature for the Week
Eureka.....	.03	.03	.13	.60	50	70
Red Bluff.....	.00	.00	.03	110	70	60
Sacramento.....	.00	.02	.02	102	60	48
San Francisco.....	.00	.02	.02	74	48	74
Fresno.....	.00	.02	.02	110	74	64
Independence.....	.19	.21	.08	96	64	55
San Luis Obispo.....	.18	.18	.01	90	55	62
Los Angeles.....	.08	.08	.00	90	62	64
San Diego.....	.00	.00	.02	76	64	74
Yuma.....	.08	.08	.02	106	74	



## HORTICULTURE.

### Principles of Pruning.

Written for the PACIFIC RURAL PRESS by ERNST DOLGE, Lamanda, Los Angeles County.

To prune is to remove some part of a plant that we deem harmful or at best unnecessary. There can be no successful pruning without some understanding of the principles that govern the subject—that is to say, none without theory. The farmer who has no use for theory or study is rapidly becoming a back number, because the wedge of intelligence is driving him from the field.

We can divide the principles of pruning into two distinct classes:

Training—or pruning for shape, and  
Trimming—or pruning for the conservation of energy.

TRAINING.—In training the objects in view are:

1. The equal distribution of sap.
2. The formation of a manageable top.
3. The training of the tree to some desired form.

1.—Upon the equal distribution of sap depends the vigor of the tree. We can see examples of this everywhere; carefully pruned trees do better than neglected ones, even though otherwise treated alike. Again, among the wild species, the most symmetrical plants are generally the most vigorous. By the equal distribution of sap we naturally bring about an equal distribution of energy, and thereby prevent one part being overtaxed for the benefit of another.

To bring about such a desirable condition, we begin by directing the energy of the young tree into three or four main channels or branches. To perfect this plan we must remove anything that might interfere. Each of these main branches is pruned so as to subdivide into two or three parts, and these in turn are divided. This process is continued until we have as balanced a tree as nature will permit. In all such training we must seek to keep the newly formed branches of equal vigor by pinching those that outgrow the rest.

2.—While training a tree for the equal distribution of sap we must bear in mind that besides the above consideration we also need a tree of a manageable form. By this we understand a top that can be easily operated upon in fighting insects and fungi, in pruning and picking and in the general management of the orchard, such as plowing and cultivating. This means that the tree must not be too high for picking and pruning, not too dense for spraying and fumigating, and not too low for plowing and cultivating. We do not believe in parading our horses under the trees any more, but at the same time there is considerable advantage in directing the cultivator there to stir the ground, and in plowing within a reasonable distance of the tree. Besides this such an open bottom acts as an aid to ventilation, which we know to be an important consideration in fruit production.

In a well formed and well trained tree no props ought to be needed, as the necessity for their use generally arises from the overproduction of neglected branches—often semi-converted suckers that have attained an unusual length. A rank straggling growth is not the sign of careful training.

3.—Most of us have our own ideas on any debatable question. Under this head we put the various forms of trees, open center, pyramid, globe, vase, goblet, neglected, etc. There are advocates of every system who firmly believe that their method is the best, and it must be left to each grower to decide which he takes up. Every method or form has its merits—some more than others, perhaps—and it is only by careful study and comparison that we are brought into position to decide which we deem most advantageous. But whichever one a man adopts, he ought to follow all through, for it is difficult, to say the least, to train an old tree all over again.

It is not the object of this paper to dwell on the merits of the various forms but rather to point out the necessity of study on the subject. The interested reader is referred to Bailey's "Pruning Book," Wickson's "California Fruits," Barry's "Fruit, Garden and the Culture of the Citrus."

TRIMMING.—The object of trimming, as stated above, is the conservation of energy—that is, to direct the tree's vigor where it will do us the most good for the least trouble. We know that in nature there is a tendency for the improved and cultured plant to revert to its wild state. We fight this tendency in trimming.

If a well-trained tree is neglected it soon becomes as bad as, if not worse than, one that had to fight for itself entirely. Suckers throw the trained but afterwards neglected tree out of balance and destroy all the benefits of proper training. To avoid such an unpleasant state of affairs we trim:

1. To modify the vigor of the tree.
2. To produce more and better fruit.
3. To remove useless and injured parts.
4. To maintain the form obtained in training.

1.—A wild tree will, under favorable conditions, grow with splendid vigor, but will generally do little towards fruit production. It is only upon injury or some other check to growth that the tree gives more

energy to the reproduction of species or fruit. For this reason we hold the vigor of a cultivated fruit tree in check by pruning both root and top.

2.—When we have brought a tree into good fruit bearing we begin at trying to improve the quality and quantity. To do this, we carefully hold the wood growth in check and aid the fruit:

1. By giving it more of the tree's strength, and
2. By exposing it, more or less, to the air and sunlight, which tend to sweeten and color the fruit besides causing it to develop more evenly.

3.—As the tree became larger, certain branches that assisted in training became useless, and must be gradually removed. Some suckers come under this head, as well as the small branches near the trunk of the tree. In the course of plowing and kindred operations, horses and tools oftentimes break twigs and branches, which should be treated as soon as possible. To make a smooth cut of the injury and to train a substitute should be the aim of the orchardist.

4.—Probably one of the most difficult tasks in pruning is the trimming of a tree to retain its form. Good judgment and keen observation come to our assistance in this matter, however, and experience is a part of the cost of ability.

Properly trained and trimmed trees require but little severe pruning, because nature responds with such a good will to the efforts of man, gladly helping those that help themselves.

### Iron for Pear Blight.

TO THE EDITOR:—In the PACIFIC RURAL PRESS of even date I find on page 68, in discussing the pear blight, mention made of copperas as a remedy, and that makes me bold to give my experience in Michigan. A farmer there complained to me that his pear trees were dying from blight. I told him that I had heard that cinders from the blacksmith shop worked into the ground would cure the blight; also, that rusty nails driven into the trees would cure it. He tried both and the same season noticed a great change in his trees; for years after his trees looked strong and healthy, of good color, etc., and bore good fruit. I do not know whether it was blight or not, but do know of the good result of driving nails into sickly-looking old pear trees in Michigan.

San Jose.

WM. KELLY.

When iron is needed by a plant, supplying it produces marked effects. It has never been demonstrated, however, that putting anything into the trunk affects the tree. Putting iron into the soil is a more rational proceeding, and the blacksmith's cinders had much of it. California soils are usually well supplied with iron, though there are places where copperas and other forms of iron have been used to advantage. It would be of immense advantage to demonstrate that bacteria in the sap could be pursued and killed by germicides entering by the root. So far as we know, this demonstration has not yet been made.

### Blackberry Growing in Sonoma County.

The Gold Ridge country of Sonoma county is famous for its productions of berries. Secretary Luce of the Sonoma County Board of Trade gives the Santa Rosa Republican some figures on this industry. On one place in that district, consisting of 4½ acres, the owner harvested nine tons of blackberries from three acres, for which \$50 per ton was received; half an acre of strawberries yielded \$35, and three-quarters of an acre of raspberries added \$50 to the income, giving a return of \$535.

A second place yielded four tons of blackberries, at \$50 a ton, on 2½ acres, and a third place of three acres yielded eight tons of the same fruit, or \$400 for the crop.

A fourth place, containing seven acres, brought its owner \$350, producing seven tons of berries. Four acres of blackberries on another place yielded twelve tons at the price given above, and one acre of strawberries on this same place netted \$98.25. Still another blackberry patch of six acres produced nine tons of fruit.

The total acreage mentioned in the above is 24½, and the sum produced by the combined places was \$2813.25, or over \$100 per acre.

The industry of blackberry growing is yet in its infancy, and indications point to the planting of a largely increased acreage next year.

### The Crown Borer of the Peach.

A recent publication from Cornell University approves the application of gas tar as a practical and inexpensive remedy against peach tree borers. The experiments by Prof. M. V. Slingerland have shown conclusively that this material can be applied to trees over two years old with perfect safety. Prof. W. G. Johnson has used it on peach trees four to six years old with perfect results. An application was made in a Blue Ridge mountain orchard about July 10 and

only an occasional worm was found in a block of 700 trees the following September. In an adjoining orchard, about the same age, borers were abundant, two to eight being taken from each tree. Prof. Johnson writes to the Orange Judd Farmer that the gas tar treatment is so simple there is no good reason why it should not be universally used in the near future. Orchardists who have not tried it should procure a small quantity from the nearest source, and test it on a few trees at first. There is a great difference in gas tar from various factories, and it should in all cases be tested before being extensively used in a large orchard. One application put on with a brush early in July in the East will last until late fall and keep out the borers. No material has been found to give such satisfactory results as gas tar; but it should not be used on young trees the first year. The application in California should be made much earlier in the season, for our mild winter climate brings out the moth earlier. This remedy has been very successfully used by some San Jose growers, as has been shown in these columns.

### Cure for Tomato Blight

TO THE EDITOR:—Last year we had the tomato blight spoken of by "Subscriber" in last week's PACIFIC RURAL PRESS. After losing over half my vines, I took coal tar, or gas tar, and painted on the north side—where it was less exposed to the sun—about 8 or 10 inches, commencing at the ground and painting one-half of the large stems and touching in several places through the branches. The result was a perfect cure. A neighbor lost all of his vines but four and a half. I gave him some coal tar and he saved the four, and even the half vine. I had two vines on new land this year that were badly diseased when discovered. I treated them at once, and they have entirely recovered; they have grown as high as the fence and are full of fruit. The disease is a very minute parasite and is not bacteria. They work in the stem near the ground. The coal tar is instant death to them. The fumes may be as deadly as the tar itself.

THEODORE STALEY.

Placentia, Orange county.

### Bees and Pear Blight.

The Kings and Tulare county boards of horticulture held a joint meeting at Hanford last week on the relation of bees to pear blight. After discussing the subject quite extensively a resolution was passed declaring that the pear blight, which is a great menace to the pear industry, is distributed mostly by bees, therefore the bees are a menace to the pear industry in these counties.

The horticultural commissioners of Kern, Tulare and Fresno counties will be asked to adopt similar resolutions and assist in making a combined effort to have the bees removed from the fruit districts of the counties above mentioned.

## THE VINEYARD.

### The Santa Clara Vine Trouble.

TO THE EDITOR:—Much has been said, written and printed touching the cause of the wholesale dying of the vineyards of this county. Many theories have been advanced, some of which possess a shadow of plausibility, while others are utterly without merit. The "drouth" argument falls flat, from the fact that a few small vineyards located on very high, dry positions and abandoned for several years survive, while others on lower lands, where moisture was abundant, perished.

The "frost" theory drops down when it is remembered in years past where vineyards were cut down three several times in a single season and came out finally in the end all right—of course, without fruit that year. The "exhausted" theory contains some merit, but not enough to justify the awful devastation among old and young vines on new ground as well as old. All these "guesses" must be put aside and the search continued for the real cause; for if the real cause is not discovered and a remedial agent found, viticulture in California will soon be a thing of the past.

Like others, I have an individual theory, which is not all a mere theory, for there is certainly ground-work enough present to give my idea a hearing and place it, at least, upon the stepping stone of reason. But, in order to clearly demonstrate my position, certain data is necessary which at this moment is not available, but which lies within the power of our experimental stations to obtain.

I ascribe the whole difficulty to the poison of the vinehopper, infused into the vine for the past four or five years. The present season the vinehopper is not present, it having taken that insect several years to so poison the vine that it became distasteful to him, and he took his departure, leaving behind him an irreparable swath of destruction.

I am informed that vines have mostly escaped the "mysterious disease" in the eastern and western foothills of the valley. I am also informed that the



presence of the vinehopper has never been so noticeable there as in the low lands.

I am not vouching for the correctness of this information, but merely give the statements as they were given me, in order to give those who are "seeking the cause" a hint that they may take the cue and follow it up.

I am informed by Mr. Alexander Craw, State Quarantine Horticultural Officer, that the vinehopper of this county is not the same as that of Fresno and other southern and eastern counties; but I do know that ours is a most destructive, as well as disgusting, insect.

Last season the vineyards in this locality were swarming with them, and moist ground about each vine—with its shriveled leaves and generally dilapidated appearance—gave unmistakable evidence of the presence of this abominable pest. A. KAMP.  
Mountain View.

#### Prof. Pierce's Opinion of the Santa Clara Vine Trouble.

Newton B. Pierce of Santa Ana, vegetable pathologist of the Department of Agriculture, whose work on pear blight we have frequently cited recently, has been investigating the condition of the vines in Santa Clara county. He contributes an article to the Fruit Grower, giving some of his views about the cause of the vines dying. After stating that he found the vines in far worse condition than anticipated, he says in part:

The causes responsible for the present condition of these vineyards are several: (1) The region has suffered from three years of drouth; (2) phylloxera is found, more or less generally distributed, in portions of the district; (3) two successive frosts have injured the spring growth the present year and resulted in a late growth or an entire absence of growth, and (4) some unknown influence has resulted in an injury to a large number of vines over a wide area and in a manner strongly reminding one of the effects of the California vine disease.

That drouth is not alone responsible for the serious condition of the vineyards is evident from the fact that vineyards which were irrigated during the past dry seasons are also suffering, and also from the further fact that an abundance of water failed to aid vines which had done fairly well during the three dry years, but which are at present in a deplorable condition. Phylloxera is likewise not responsible for the new and general phenomena of disease observable, as large tracts of vines not infested by this insect are suffering seriously. The third influence—frost—has produced marked effects, which will not be wholly overcome before fall, and in some instances may account for the death of certain stocks. The cold of the past spring cannot, however, be properly held responsible for all of the trouble seen, as some of the vineyards were seriously affected last year.

Whether the undetermined injurious influence noted in these vineyards is the same as that which has destroyed tens of thousands of acres in southern California and thousands of acres in the upper Sacramento valley, the California vine disease, has been found a difficult matter to settle at this time. The two main reasons for this are: First, the cause of the California vine disease is unknown; second, there are so many injurious influences at work at present in the vineyards of the Santa Clara valley that the effects arising from any one cause are obscured, and confused with those due to other entirely different influences.

Owing to these facts the writer will not express an opinion at this time as to the presence or absence of the California vine disease in that district, but will make an effort to again carefully review the situation at the time of vintage, during which period the characters of the named malady are best recognized.

### FRUIT MARKETING.

#### An Appalling Waste.

TO THE EDITOR:—The fresh fruit now sent to the Eastern market in several thousand carloads each year is sent forward under no common plan—a hundred shippers without any knowledge of what supply their cars will find in market upon arrival shipping almost entirely at random to a hundred different markets. What an utterly foolish way to conduct business!

WHAT HAS BEEN THE RESULT?—When more cars arrive than are needed to supply the local demand the market is glutted and prices fall, often below the cost of transportation. The effect of this in one market is to depress prices in all other tributary markets. This is constantly happening every year in some part of the country. What losses result from this lack of any regulated system of distribution?

First—The grower loses, and in any but an exceptional year he loses so heavily as to leave him very little to show for a year of the very hardest kind of work.

Second—The Eastern fruit dealer is likely often to

lose heavily, for if he buys a car of fruit at a fair price, and then enough more cars are thrust in to glut his market before he has sold, he loses very heavily. Thus he runs a very serious risk, and no one, unless well paid for it, will long continue to do business in which he must run such risks.

Therefore, he adds a heavy profit to the price for his fruit whenever he finds his market in condition to take it. This makes the fruit too costly for the masses to buy, seriously lessening the demand, and leaving a surplus product in California, in years of normal production, and this points to the necessity of digging up orchards rather than of planting new ones.

The fruit shipping firm more often than otherwise loses money, although they sometimes seek to cover such losses "by ways that are dark and tricks that are vain." They, too, charge heavy margins of profit because of heavy risks.

Although the consumer may sometimes profit by a glutted market, such advantage is more than balanced by the excessive cost of his fruit at other times.

Thus every one but the railroad and refrigeration companies loses, and even these could make much more at the same rate of charges if the fruit were sent forward by some orderly plan, for the constant and unmethodical diversion of cars is a source of continual difficulty with both. Nor does the fruit arrive in so good a condition in market as it would if distributed in an orderly way.

If this commercial chaos causes an average loss of but 20 cents per box—and this would seem a very conservative estimate—the total loss to the fruit growers of California in a year of average crop would be \$1,200,000—enough to pay interest at current rates—on large sums with good security—upon \$30,000,000. Think of it! The use of \$30,000,000 offered to the fruit growers annually, and they won't take it. This is sheer waste, and its loss falls upon men poorly able to bear it.

This constant loss, with risk of greater ones, checks the proper and legitimate development of our whole State where fruit can be grown. It is one large factor in causing an actual loss of population in some of the most fertile portions of this State.

CAN IT BE PREVENTED?—No doubt this loss will be universally conceded, but it will be asked how it can be prevented. Few things in business are easier than to organize the distribution and sale of products which are restricted to certain definite and limited districts of production. If the producers will but organize and place their product to be distributed by one common agency which they thus create and control, the thing will easily be done, for it is far easier to do business in an orderly than in a disorderly manner.

But it will be urged that so perverse is human nature, and especially the nature of fruit growers, that this co-operation can not be hoped for.

It is by no means certain that this is so, for in other lines of fruit industry we have seen 90% of the whole class thus uniting for a common purpose. But suppose not even half of the fruit growers can be persuaded to thus co-operate for their common benefit, even then this waste can be largely stopped; for, if it only controlled but 30% or 40% of the product, such an organization would have the effect to so reduce the numbers of shippers that it could arrange with the remainder such a division of territory as would make possible an orderly distribution of the product in Eastern markets.

A CATECHISM.—Is there any other way in which this can be done? Yes, this is exactly the method which has proven so successful with the citrus product.

What hope is there of speedy organization to stop this enormous waste? There is every promise that before another crop is marketed such an organization will be effective. The California Fresh Fruit Exchange, with headquarters at Sacramento, was organized last May upon the very plan that has proved so successful in marketing citrus fruits.

It has been doing business up to the present time, meeting successfully all of the changing market conditions, getting certainly as good average market prices for fruit as have its old, powerful and hostile rivals, and making savings for its members which are not offered them in any other way.

This demonstration was a necessary preliminary to any great increase of the organization, because so many growers would insist upon waiting until this method of marketing fresh fruits had been tried before consenting to join the movement. The test has now been made, and it has been shown that the grower can in this way protect and promote his own interest.

THIS WINTER'S WORK.—The way is now clear for a strong campaign for the Fresh Fruit Exchange during the coming fall and winter months that shall result in securing affiliated local organizations for assembling fruit in car lots in every important fruit section. For this organization work a score or more of good men are needed who will fully acquaint themselves with this method of co-operation and give their time and energies freely to push forward this movement.

Such men are found among raisin growers, prune growers, and citrus growers of the south, and we believe such generous and earnest men will be found

among fresh fruit growers and citrus growers of this part of California, for it is intended to include the orange growers of this part of the State in this organization. This work, too, is just as necessary for regulating coast as Eastern markets.

When this organization becomes large enough to secure such organization of fruit distribution fruit orchards will again become everywhere sought for, values of fruit land will be doubled, because they will pay dividends upon more than twice the real valuation that they now have, and the industrial pulse of the city and country will beat strong, because everywhere courage and self-reliant activity will have taken the place of doubt and indifference born of despair. This very year should see this change.

A. R. SPRAGUE,  
Gen. Man. California Fresh Fruit Exchange.  
Sacramento, Aug. 5.

#### The World's Almond and Raisin Crops.

Consul B. H. Ridgely of Malaga, Spain, reports to the State Department, under date of June 20, that he has been able to secure some figures concerning the world's almond crop, excepting the crop of the United States, which may be of interest just now to our dealers and growers.

The following table, carefully prepared from figures furnished by various statisticians and experts, shows the approximate production of the various countries during the years 1899 and 1900, and the estimated production for 1901, in tons of 2204.6 pounds:

Country—	1899.	1900.	1901.
Bari (Italy).....	12,000	1,500	15,000
Sicily.....	7,000	2,000	8,000
Majorca.....	5,000	2,000	4,000
Spain.....	5,000	1,500	4,000
Provence.....	1,000	3,000	5,000
Portugal.....	500	800	500
Morocco.....	2,000	4,000	3,500
Totals.....	32,500	14,800	41,000

The new sweet Palma and Girgenti almonds have been offered from Messina at \$34.25 per 100 kilograms (220.46 pounds), gross weight, for October shipment. It will be seen that Bari (in the province of Apulia, Italy) is the principal almond market of Europe. Concerning the Bari crop, the consul says that he has seen a letter from an authoritative source saying that this year it will be the largest ever known—possibly as much as from 18,000 to 20,000 tons. This is due not only to the favorable season, but to the great increase in almond-bearing trees.

The most recent sales of Bari almonds, according to the reports received, were at 85s. (\$21.90) per cwt., c. i. f.

The Malaga crop is now virtually assured and will probably be the largest in several years. This refers to all the almonds marketed there, the two varieties of which are commercially known as Jordans and Valencias.

The Jordan almonds are grown in the provinces of Malaga, Granada and Almeria, and are marketed exclusively at Malaga. Nearly the whole crop, which is variously estimated at from 80,000 to 120,000 boxes of twenty-five to twenty-eight pounds each is exported to England and the United States. These are undoubtedly the finest almonds grown in Europe.

The almonds known commercially as Valencias are grown in the provinces of Malaga, Almeria, Jaen, Cordoba, Huelva, Cadiz, Murcia and Carthagena, as well as in Morocco. The principal market is Malaga. The most recent sales of these almonds from last year's stock were at 22s. (\$5.36) per box of twenty-eight pounds.

EUROPEAN RAISIN CROP.—Reports from reliable sources estimate this year's Turkish crop at about 410,000 cwts. of Sultanas and 107,000 cwts. of Elemes. The Denia raisin crop of last year amounted to 600,000 cwts. This year a still better crop is expected. Upon the whole, this year's European crop, if present prospects are realized, might be roughly estimated as follows:

	Cwts.
Sultanas.....	410,000
Elemes.....	107,000
Denia.....	650,000
Malaga.....	250,000
Total.....	1,417,000

Last year the failure of the Greek currant crop had a marked effect upon the Malaga raisin market in creating an extraordinary demand at fancy prices for the so-called seedless raisins of Malaga. As a matter of fact, these are not seedless, and it was found that they could not serve the same uses as Greek currants. Late reports indicate that the Greek currant crop this year will amount to 140,000 tons.

#### English Walnuts Abroad.

Special Consular Reports Received Through the Pacific Commercial Museum of San Francisco.

A. H. THACKERA, Consul at Havre, France, under date July 10.—In the region of Havre comparatively few walnuts are grown, and from this consular district none are exported directly to the United States. Havre being one of the principal outlets of



the exportations from France to America, large quantities of walnuts during the season are shipped through this port by transit agents, consular invoices for which are made out in the districts whence the nuts come, or where they originate. As a result of interviews with the principal Havre shippers and agents of steamship lines, and from correspondence with several of the largest nut dealers in the center and south of France, I am able to give the following information:

**Center of France.**—Everywhere in this region the walnut trees present a fine appearance. They have not suffered from hail, from drought or from rains. The nuts are of an average size for the season, and the chances are that there will be a good average crop. In the center of France the consumption of oil made from walnuts for food purposes is large. Several of the dealers claim that the local crop is not sufficient for their wants, and almost every year walnuts have to be imported. The prices quoted on June 30th last for the old crop on cars at Potiers are 20 to 21 francs (\$3.86 to \$4.05) per 100 kilograms (220.46 pounds). Last year the prices were 28 to 30 francs (\$5.40 to \$5.79.)

**Apricots.**—The outlook at present is for a poor crop.

**Prunes.**—In general, the crop will be very good.

**South of France.**—It is the general opinion that there will be a good average crop, but not a record breaker. I could get no quotations for the new crop of walnuts, as those interested claim that the season is not far enough advanced to make even an intelligent guess.

**ALBION W. TOURGEE, Consul at Bordeaux, France,** under date of July 8.—The general report is that the crop will be very poor. Though it is too early to judge its amount or character, the season being at least two weeks late, there is nothing in the present condition of the walnut crop to justify such report. It has not perhaps set as fully as it sometimes does, but there is every prospect that the nuts may be large and of good quality, if not injured in the curing season, which is the crucial period. The market will probably be a fortnight later than usual. The present long period of wet weather has been so cold that there seems to be no danger of mildew or other disease. Indeed, the young nuts appear to be in excellent condition.

**Prunes.**—It is still too early to determine with safety, except that it now seems altogether improbable that the quantity of the crop should approach that of last year. For more than two weeks there have been almost daily rains, often of great abundance for this region, with several severe storms accompanied with hail. There were a very few hot days. Since that time the weather has been unusually cold. It is still raining every day, but if it should clear off dry and breezy the crop will be but little effected. It has now rained eighteen consecutive days; if it keeps up much longer and the weather is as warm as one may expect it to be, the crop, no doubt, will be bad, and a large portion of the young fruit would be likely to decay. While it cannot be said, therefore, that there is any positive change in the situation, the probabilities are less favorable.

The market will probably be some weeks later this year than usual, and will not show prices before Sept. 15th or 20th.

## RANGE INTERESTS.

### Land Leasing for Range Preservation.

F. C. Lusk of Chico, Cal., president of the American Cattle Growers' Association, is a strong advocate of some system of land leasing. He was in Portland, Or., recently, and to a representative of the Oregonian he outlined his own views, as well as expressed the sentiments of the Association he represents.

**A PROPOSED LAW.**—In speaking of a bill the Association is getting up to cover the much mooted question of the disposition of Government land, Mr. Lusk held that: "Public opinion is largely formed by those directly interested. In the convention at Fort Worth in January, 1900, of the National Live Stock Association, a body composed of the owners of all kinds of stock, sheep predominating, a resolution favoring land leasing was passed. A bill providing for it was introduced in Congress last winter, and the subject at once became a general theme of discussion. Public opinion in the arid land States mostly affected appeared adverse. This was caused by owners of the innumerable bands of migratory sheep, who naturally oppose it, and by the small cattlemen, who, not understanding the proposed measure, feared that they would be frozen out by large cattlemen or sheepmen monopolizing the leases. But in the past year and a half events have followed so rapidly on the ranges, and the facts became known, that public opinion has changed with great rapidity on the subject. In Colorado, for instance, the change is almost absolute. The cause of this change will be perceived by the answer to the questions you ask as to the reasons for the law, and a general knowledge of its proposed features.

**THE CATTLEMEN.**—"Growing cattle on the ranges of the arid States is the pioneer industry, com-

menced and brought to a high state of perfection many years before sheep were there at all. Most of the older cattlemen fought the Indians in starting their plants. The company I represent, in Harney county, in Oregon, lost all of its buildings, much of its stock and the lives of some of its employes in the Indian outbreak of 1878. There is no such thing as migratory cattlemen. The nature of the business prohibits it. They must have a fixed habitation, a ranch, a land plant with fences, buildings, hay fields and means to protect and care for the cattle in winter. These have been the growth of thirty years or more, and vary all the way from the ranch worth \$5000 up to the investment of \$1,000,000, on every dollar of which and all their cattle full taxes are paid to the local county. They now find that countless migratory bands of sheep, a majority in the hands of Basques and Portuguese, who are not citizens and pay no taxes to the local county, and have no ranch or landed headquarters anywhere, swarm all over their ranges, up to their fence lines, and not only drive and run their cattle out, but are also utterly destroying for all time the feed on the range.

**AN INSTANCE.**—"To illustrate, our company pays into the treasury of Harney county a very large sum annually for its and Oregon's benefit. Yet hundreds of thousands of migratory sheep pour into that county in the summer from Idaho, Nevada and elsewhere, utterly devastate the range and retire in the late fall without contributing \$1 to the county tax fund; but, on the contrary, lessen its tax roll by cutting in two the amount of cattle and sheep its residents could carry and pay taxes on, if the migratory sheep bands were kept out, although that county has ample range and feed for all the stock it could own and winter. In these cases it is not a free range, because cattle will not range where sheep are, and the herder with his dog readily drives them off if they attempt it. The statistics furnished by the Agricultural Department show just what such a state of affairs leads one to expect—that the cattle are rapidly decreasing in the Transmississippi States and Territories. For instance, in Wyoming in the last ten years, over 50%; in other localities, 66%, and in some places even more; hence, the price of beef is constantly advancing, and has now reached a point that in the Eastern cities makes it a luxury to the common people.

**SHEEP VS. CATTLE.**—"Another reason of great importance for such a law is that the ranges are now open battlefields between sheepmen and cattlemen, and also between the sheepmen themselves. In these battles last year the homicides were numerous. There have been many this year—three in one fight a short time ago. One here can have no idea of the intensity of this feeling on the ranges of Wyoming, Colorado, Utah, New Mexico and other States. In many localities small cattlemen see their homes and ranches of twenty years' standing invaded by vast bands of migratory sheep, and they have organized and established dead lines, and are guarding them to-day with rifles. But the sheep men come to the edge; hesitate, perhaps, for a time, and then say: 'We have the legal right to cross; our sheep have eaten it clean behind us, and we must cross.' And they do. Then comes bloodshed, homicide and the law openly violated. Each side shoots as well as the other. It is obvious this cannot go on in a civilized country, and nothing can stop it but a leasehold law.

**DESTRUCTION OF THE RANGES.**—"But the controlling reason for the passage of this law is that the range, with its capacity to furnish meat food for the country, is being rapidly destroyed. The destruction has advanced during the past two years with lightning rapidity. Already there are large districts in Nevada, Utah and Wyoming where the destruction is an accomplished fact, and nothing grazes where large flocks of sheep and bands of cattle once fattened. The immense increase in the migratory sheep in the past few years has brought the question to a focus. The result of destroying the feed on the ranges, including, as it does, all the willows and small brush on the little mountain streams, is not only to ruin them, but the meadows in the valleys below, which are practically all in private ownership. The snow will cease to lie in the brush and come down gradually, feeding the meadows until haying, but comes all at once in the early spring, and then the meadow dries and wastes. The water in times of flood rains, instead of passing over the sod that the natural grasses made on the hills, without removing the soil, finding the sod gone, tears up the earth and sends it down on the arable land below, covering it with deep deposits of sand and destroying its value. The same causes have destroyed valuable lands at the foot of the Caucasus and the Pyrenees. A sudden freshet in February last in southern Harney county and Nevada brought down from the hills immense quantities of silt and buried roads and meadows in many places more than a foot deep and to a degree never known before by the oldest inhabitants. For the destruction of the ranges, with all its future consequences, no human being can suggest any practical remedy, except the leasehold control, and that forces the passage of such a law in Congress.

**PRECEDENTS FOR LEASE LAWS.**—"We are frequently asked if it will not be difficult to frame and administer such a law in a manner that will do justice

to all. By no means. Such laws exist in Australia and Texas with satisfaction to everyone. Texas owns all its public lands. Both jurisdictions found themselves confronted with the same difficulty we are now in, and adopted the only remedy—a wise lease law. In each place now the stock business is on a permanent basis. Each stockman knows how many sheep and cattle he can carry without injuring his leasehold. Nothing could induce either Texas or Australia to abrogate their lease laws and throw open their ranges to the old conditions of overstocking, consequent destruction and continual battle and violation of law.

**A WIDE ADVANTAGE.**—"The law will be for all—sheepmen as well as cattlemen. Many sheepmen favor it, and are just as anxious for its passage as the cattlemen. This is especially so of the sheepmen who have a fixed habitation—a ranch where they can cut hay and care for sheep in winter. I am in receipt daily of communications from such men, who tell me that while they know they cannot join the American Cattle Growers' Association, they favor such a law, and want to aid in its passage in every manner possible. The whole situation was adequately summed up a few weeks ago by one of the most prominent sheepmen in Wyoming, who said that he realized that the time had now come that everyone who owned sheep or cattle on the public range must have the ability to control a definite portion of it by lease.

**PROTECTION TO ALL INTERESTED.**—A vital feature of the new law will be protection by preference right to lease to actual residents and owners in a county, this to cut off all possibility of foreign syndicates coming into a county and renting the land away from the local resident stockmen. The bill will be fully safeguarded against any such star-routing.

"Another equally important feature will be the prohibition against leases being put up at auction. Many small stockmen have been justly and naturally frightened by the suggestion that the leases would be put up to the highest bidder, and the wealthy corporations would thus secure them all. The auction feature will be prohibited and a fixed reasonable rent established. The most important feature that the proposed law will contain will be a provision adequately protecting the small stock owner and assuring his right to a full proportionate share of the ranges in his respective county. This must and will be plain and emphatic. No bill will ever pass the Congress of the United States that does not contain these three principal features in plain and unequivocal language. It is thought by those best informed on the subject that when a bill is framed fully protecting the small stockman as against his larger neighbor, giving the preference to the actual stock grower in each county and prohibiting any auction of leases, and it is generally circulated, that all opposition to the measure will vanish from the stock counties, except from the owners of migratory sheep bands.

**RENTALS AND IRRIGATION.**—"It is wisely proposed that the bill shall require the Federal Government to donate to each State the rentals received in it, to be used for works to promote irrigation by storage of flood waters. This question is one of supreme importance to every State having arid lands. Careful estimates place the amount to be thus yearly used at \$10,000,000. It will be remembered that at the last session the great River and Harbor bill, carrying an appropriation of \$63,000,000, was defeated by an arid land State Senator, because the East would not consent to include a paltry \$400,000 for promoting irrigation in the arid States. With such a bill as we propose, the East will be relieved from the burden, ample sums for this great work will be provided, and hand in hand will go the preservation and improvement of the ranges with the storage of the flood waters for constantly increasing irrigation."

### Long Pipe Line for Irrigation.

The great pipe and ditch line of the Temescal Water Co. is almost completed, and several hundred inches of water from the Perris wells will soon be flowing to Corona, a distance of more than 30 miles. What makes this achievement more noteworthy is that this water was developed by the Corona company at Perris, which had been without water from early days. The company sank artesian wells and obtained an abundant flow in a country that looks like a desert.

The first 250 inches will be turned into the new line from the wells that are now ready for pumping, and it is estimated that 150 or 200 inches of this amount should reach the head of pipe line No. 2 before the end of the week. By that time the electric plant and the pumps for the remaining wells will be installed and the company hopes to be able to re-enforce the first flow of water with at least 300 inches more—between 500 and 600 inches in all. The capacity of pipe line No. 2 is 400 inches, but not near that amount is needed to supply the planted acreage under that line, so that probably half of the fresh supply will be available for use in pipe line No. 1—the lower line—which at present irrigates by far the largest acreage. The company should now be able to furnish its stockholders with all the water their stock calls for, and at reasonable intervals, something they have not been able to do for nearly four years.



## Agricultural Review.

### ALAMEDA.

**SHORTAGE OF SACKS.**—A Livermore dispatch says the farmers in the Livermore valley are apprehensive, as the stock of grain sacks has so materially decreased that unless they are able to secure a new supply soon some of the threshing machine outfits must stop work. This shortage is due to the fact that no sacks have been shipped from San Francisco since the strike. Some of the farmers talk of going to San Francisco and hauling their own supplies of sacks to the depot.

**TREE PLANTING FIGURES.**—Niles Herald: Much has been said and written as to how far apart trees should be set in an orchard. The following figures from experiments by County Horticultural Commissioner William Barry throw some light on this subject: He took a block of seventy-three apricot tree, set 20x20 feet apart, and this year weighed 9425 pounds of fruit, while from another seventy-two trees, 20x40 feet apart, of the same age, immediately adjoining, he took 18,314 pounds of fruit. The apricots in the first lot ran small, while those in the second lot all average large.

### COLUSA.

**LIBERAL PRUNE YIELD.**—Colusa Sun: Joseph Boedefeld has forty-five acres of prunes on the east side which he says will yield over 100 tons, and he ascribes the fine crop to having allowed the water to stand at a proper time for two weeks upon the land.

**A BAG FACTORY.**—Colusa Herald: A project is being considered for the establishment of a jute bag manufactory in Colusa which will be capable of supplying all the grain hags needed in the country between Knights Landing and Red Bluff. The company is to be organized with a capital stock of \$100,000 and all of home capital. The capacity of the factory is to be 5,000,000 hags a year, and will give constant employment to 120 men. It is proposed to run the plant by electric power. Jute will be used only until sufficient hemp can be grown in this valley to supply the demand of the plant.

### FRESNO.

**BIG SHIPMENT OF MULES.**—Fresno Republican: T. H. Gilroy yesterday shipped by the Southern Pacific ten carloads of mules to Kansas City, where they will be sold to the Government. Such a shipment is an unusual one from Fresno, but the mules, like other Fresno products, are fine specimens.

**BIG GRAIN FIRE.**—Hanford Journal: A grain fire occurred in the Dry Creek country northeast of Fresno Sunday. The fire started on the Burkhead ranch, now occupied by James Finch, and destroyed the harvester, harness and barn. It then spread east to Dry creek, a distance of 8 miles, and then north to the Simpson place, 5 or 6 miles farther. The heaviest loser is probably Sheriff Collins of Fresno. The fire destroyed ninety tons of haled hay belonging to him, a house, barn, horse power, troughs for the cattle, and then swept over 2500 acres of pasture land. J. S. Kelson lost thirty tons of haled hay and J. Shipp 100 tons. D. C. Samples and the Simpsons lost all their feed.

### HUMBOLDT.

**GOOD PRICE FOR WOOL.**—Eureka Standard: J. H. Hooker and Thos. Blair have sold their wool, which altogether approximates about ninety tons, to an Eastern wool buyer. The price reported to have been paid them was 18c. per pound. The price generally named by local buyers is 16c.

### KINGS.

**FRUIT GROWERS DOING WELL.**—Hanford Journal: The growers are well pleased at the way in which the market is opening up for dried peaches this year. There are quite a number of buyers in the field and they are rustling for the fruit. The price opened at 4½ cents and has risen to 5 cents. The entire peach product of the Verona orchard is reported sold at 5 cents per pound. Much fine fruit is being harvested, but the average size of the peaches would have been better if the crop had not ripened so fast. Grapes are ripening and Sultanas and Thompson's Seedless will soon be going onto the trays. There has been quite a heavy competition this year for apricot pits. A few years ago this was an almost useless product, being used only for fuel, if used at all. Several years ago the purchase of pits for export to Germany began. The price started at \$3 per ton and this year it rose to \$12.

### LOS ANGELES.

**MONEY IN BEETS.**—Los Angeles Express: The three sugar factories of southern California will soon be in full opera-

tion, and that section of the State will have the benefit of between \$2,000,000 and \$2,500,000, which is to be expended through this means during the next four months. The three factories combined this year employ in the neighborhood of 500 persons.

**GOOD PEACH CROP AND APRICOTS LIGHT.**—Pomona Times: The Pomona Deciduous Fruit Growers' Association has cured about sixty tons of apricots, and expects to dry about 500 tons of peaches. The apricot crop is even shorter, locally, than many expected, but the peach and some other crops of deciduous fruits are quite large in many orchards.

**WHEAT RUINED BY RUST.**—A Chatsworth Park telegram says a gang of fifty men is now harvesting the wheat crop on the Workman rancho, one of the six grand divisions of the Los Angeles Farming & Milling Co.'s lands in the San Fernando valley. There was promise of the greatest crop in years, and there never was so much straw; but the rust has reduced the yield of grain to less than half the average crop and ruined it for milling purposes. It will be rolled or ground for bran and fed to stock. Australian wheat was the kind sown, as it is considered best for flour. Defiance wheat, on the smaller adjoining ranches, and on the Casino, where a strip through the Australian wheat was sown as a test, is free from any sign of rust. On the rancho worked by L. V. Glasscock it is yielding from eight to fifteen sacks per acre.

### MENDOCINO.

**THE HAY OUTPUT.**—Ukiah Dispatch-Democrat: T. M. Cleland, who has been running two hay halers this season, reports the crop almost disposed of. He estimates the output of hay in Redwood, Coyote and Ukiah valleys at 1200 tons. Loose hay is worth \$6 per ton in the field, while haled hay brings \$10 per ton.

### MERCED.

**GOOD FLAX CROP.**—Merced Sun: The flax crop around Turlock is a good one, and machinery has been procured to work it up. Lined oil is bringing a high price and the oil cake is also in demand, while the straw will prove valuable for hemp.

**EGYPTIAN CORN ACREAGE SMALL.**—Los Banos Enterprise: There will be very little Egyptian corn raised on the West Side this year, owing to the fact that the grain crop is heavy and the time of the farmers will be too fully occupied handling that to plant corn and care for it.

### ORANGE.

**BIG HONEY CROP.**—SANTA ANA, Aug. 2: It is now conclusively estimated that the honey crop of this county will amount to 375 tons, or twenty-five carloads, this season. This is the largest crop for the past five years.

**WALNUTS PROMISE WELL.**—Santa Ana Leader: This is going to be the finest season for walnuts that California has seen for many a day, on account of the fine quality of the nut, for largeness of size and fullness of meat. Last year there were shipped from this section 112 carloads. This year it is safe to say there will be 115 carloads, and the nuts are much larger than last year. In and around Anaheim the nuts are looking fine.

### SACRAMENTO.

**HOPS BADLY DAMAGED.**—Record-Union: J. F. Cox, a hop grower who has a crop on the Swanson place, between here and Sutterville, has had a streak of hard luck. A ten-acre field of fine hops fell and the vines are lying flat on the ground. Some of the guy wires snapped, causing a strain to come upon the poles from one direction, and down they went, much after the fashion of a pack of cards that had been stood on end and then allowed to fall over. The hops are just in the blooming stage and unless the vines can be raised they will mold and die. Eighteen or twenty acres of George Menke's hop yard, located on the Folsom road, near Mayhews Station, have also fallen, through the breaking of the anchor wires. The crop, however, will not be a total loss, as it is deemed possible to raise the scantlings high enough from the ground to partially save the vines.

### SAN BENITO.

**THE HAY CROP.**—R. P. Lathrop in Hollister Bee: San Benito county has the largest hay crop ever raised. It is estimated that it will aggregate 38,000 tons for shipment tributary to shipping points divided as follows: Hollister, 25,000 tons; Tres Pinos, 10,000 tons; Sargents and Bolsa, 3000 tons. This does not include a considerable amount of hay in remote parts of the county too far distant to be shipped. There have been shipped from Hollister station from May 15 to Aug. 1 5600 tons. Of the hay tributary to Hollister 9000 tons have been baled, 1600 tons remaining yet to be baled. There are only twelve presses running in the county. It

looks very much like there would be a quantity of hay ruined by rain before it can be haled with the present force. The price of haling is now \$1.25 a ton.

### SAN BERNARDINO.

**SMALL CROP OF ORANGES.**—San Bernardino Sun: All the estimates made so far are to the effect that the orange crop this season will be from 10% to 20% less in this county than it was in the season just passed. The recent hot weather will have a tendency to make the young oranges grow and mature and the young fruit this season promises to be exceptionally large and of a high flavor. This will also probably result in an early season. The hot weather is killing the black scale, which secured quite a foothold during the months of April and May, when the weather was cool and cloudy. Altogether, the fruit growers of this county are well satisfied with the prospects of the coming season.

### SAN DIEGO.

**LEMON GROWERS HAPPY.**—San Diego Union: Not more than six months ago lemons was being paid for lemons, but the hot weather came to the rescue of the growers by making the people in the East suffer for cooling drinks, and now the demand can scarcely be supplied. During the past two weeks the Santa Fe road has taken on an average nine carloads of lemons a day out of San Diego. "Good fruit is bringing 3c. a pound," says R. C. Allen of Bonita. "This is about as good a price as we ever have, and as high as we can reasonably expect. Last year one lot sold for 3½c. per pound, but the man who bought it lost money. Those who are now buying lemons at 3c. are not losing money on the transaction. All lemons are of course not bringing 3c., but only the best. The California Fruit Exchange is selling fruit at \$4.75 a box delivered, which is \$2 more than was received six weeks ago. The crop is pretty well cleaned up now.

### SAN LUIS OBISPO.

**BIG CROPS.**—Salinas Index: R. M. Shackelford of the Southern Pacific Milling Co. states that the crops of barley, wheat and oats between Salinas and Paso Robles are turning out far above the average. In nearly every instance sacks had been sold for an estimated yield, which turned out to be far below the actual amount, and more sacks had to be furnished. At Chualar, Gonzales and San Lucas this was the universal case, and at Paso Robles, where 15,000 sacks had been sold, 3000 more were needed. The wheat crop at Paso Robles is about 30,000 tons.

### SANTA CLARA.

**FRUIT RIPENING RAPIDLY.**—Campbell Correspondence San Jose Mercury, Aug. 3: Three days of warm weather this week proved the right thing to assist the tardy ripening of apricots and peaches. It brought the apricots to time in good shape and made the drier help and orchard hands busy. Another week will about wind up the apricot harvest, and peaches will be in evidence now until the prune harvest commences. Prunes have begun to color in the orchards throughout the district and there seems to be a fair crop in many orchards. There is a cry of small prunes this year.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian: Contracts which have been closed during the past week bring sales of this season's apples up to over 500 and probably near 600 carloads. The Eastern apple shipping season will not commence in earnest until September. Nearly all of the contracted apples are Newtowns and Bellefleurs, with a sprinkling of Langfords and Missouri Pippins.—A careful observer of the apple crop of this district says there are not over from 250 to 300 carloads of four-tier Newtown and Bellefleur apples that have not been contracted. The greater part of this uncontracted stock will be sent across the Rockies, and a part of it to Europe, as the packer who has the heaviest holding of unsold stock usually handles his fruit on his own account.—There is an unusual demand for Langford apples this season. Packers say they can sell much more than they can supply. The Langford is an excellent apple, though in some sections it shows a black spot and cracks slightly.—The buyers for the Eastern and foreign trade would like to see a standard size of apple box adopted in this State, and if necessary its dimensions defined by legislative enactment. The apple box should be of uniform size in all shipping districts.

### SHASTA.

**PRUNES, PEACHES AND PEARS.**—Anderson News: H. K. Pettygrove has finished his prune investigation for the California Cured Fruit Association and finds there are 1400 acres planted to prunes in this county. The crop will be very light this season. He found an average crop of peaches of good size and excellent qual-

ity, while the pear crop will be good and of unusual size.

### SONOMA.

**HEAVY FRUIT PACK.**—Sebastopol Times: Over 300 people are now employed in the cannery. Fruit is coming in at a rapid rate. F. R. Wetherbee, who has the management of three canneries, is devoting as much time as possible to the plant here. This year's pack will equal and probably exceed that of last season.

### SUTTER.

**HELP SCARCE AT FRUIT CANNERIES.**—Sutter Independent: The sight of about fifteen wagons standing near the shipping sheds on Wednesday all loaded with fruit, aroused the curiosity of our reporter, and, on asking what it meant, it was stated that owing to the fact of the fruit ripening so rapidly and of help being scarce, the local canneries were unable to handle all, and large quantities were being shipped to canneries around the bay district.

**BENEFITS OF IRRIGATION.**—Sutter Farmer: Down at the Meadow Farm orchard, where Mrs. M. S. Smith put in a big irrigation plant, a marked difference is noticed in the growth of the fruit trees. Already this season the orchard has been flooded several times, and the peaches have quickly responded to the effects of the extra moisture thus furnished. Tuscan clings are going from 2½ to 3½ inches, making the entire crop first class for canning purposes. Similar results are experienced in the Walton orchard in the same locality.

### TEHAMA.

**SUGAR BEETS ONLY SLIGHTLY DAMAGED.**—Red Bluff News: Hugh Mooney says the sugar beet crop on the Finnell home place is not much damaged by the cutworm after all. The worms bored a little in the tops of the beets and then made their way to the foliage, in which they eat small holes; but this does no damage, as the beets are almost ready to be gathered. On the other two tracts where the beets are growing, the cutworm has not appeared at all. A few days ago a beet was dug up and weighed twelve pounds and one ounce. It is now settled beyond question that the land around Tehama is well adapted for the raising of the sugar beet.

**YIELD BETTER THAN EXPECTED.**—Red Bluff Sentinel: John Moran, who is farming the Montgomery lands in the southern part of the county, has met with quite an agreeable surprise in his wheat yield. Some time ago he bought 17,000 sacks, which he thought would be ample to hold his crop. He found he would need 5000 more sacks.

### VENTURA.

**BEAN AND CEREAL CROPS.**—Ventura Independent: The few Lady Washingtons planted in this county are promising a very fair yield, considering the season's light rainfall. The weather for the past ten days has been beneficial to the Lima bean crop; the vines are now settling full of blossoms, and if nothing happens between this and maturing time, we should harvest the best crop since '95. The acreage of Limas planted this season "on the division," is larger than ever before known. Barley and wheat threshing is now under active headway, four machines being reported out, and in a great many instances farmers are getting a larger yield than they looked for.

**APRICOTS EXCEED EXPECTATIONS.**—Oxnard Courier: The apricot crop in Ventura county this year, now being dried, is surpassing all expectations. Early in the season, when the effects of the heavy frosts had been felt, fruit men and buyers placed the total output of the dried fruit as low as fifty carloads. It now, however, gives promise of aggregating sixty or seventy carloads. Some even place it as high as seventy-five carloads. A fair crop is being dried at Camarillo and in the Fairview and Epworth country, but the larger part of this year's crop will come from Santa Paula, Fillmore and vicinity. The price is now 9 cents per pound, the highest it has been for the past two years.

## Horse Owners! Use GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
THE LAWRENCE-WILLIAMS CO., Cleveland O



## THE HOME CIRCLE.

### In an Old Garden.

Come down to that old garden  
Of every flower we knew,  
When out of gates of childhood  
The airs of morning blew,  
And arching heaven was painted  
In every drop of dew.

And you may have a lily  
With all her virgin snows,  
And you may have the beauty  
That blushes on the rose,  
But I will have the heart's-ease,  
The dearest flower that blows!

Who will shall have the balsams  
And store of hydromel,  
The purple of the monk's hood  
With poison in his spell;  
Who will shall have sweet william  
And the canterbury bell.

I love the breath of rosemary,  
The perfume of the stock,  
The proud plumes of the fleur-de-lis,  
The silken hollyhock:  
I love the flaming poppy  
And the sleepy four o'clock.

But they say that when great angels  
Fell plunging from Heaven's frown,  
A spirit looking after  
Lost a blossom from her crown—  
I know it was the heart's-ease  
Came softly floating down.

Oh, bright the honeysuckle,  
And sweet his tipping crow,  
The bird-wings of the columbine,  
The larkspur blue as blue—  
But I will take the heart's-ease  
And all the rest take you!

—Harriet Prescott Spofford.

### The Outwitting of Sorrowful Jim.

Allyn rode across the prairie joyously, and looked longingly toward the east, where the sun was scarce an hour high. The fresh, bracing air seemed to permeate every fiber of his being, and he drew in great breaths of it, feeling a wild sort of pleasure in the mere fact of being alive.

For once in three years he was happy—and he had been in that beatific state for two whole days. The rest of the cowboys of the outfit did not know what to make of it. Cayuse Ike swore he had been "locoed." For Allyn had been nicknamed by the camp Sorrowful Jim, and to see him boyishly exuberant and in a gay humor was an unheard-of thing—until the last day or so.

Allyn had once made the mistake of considering life a very serious matter, indeed. And when, after trying for a year to practice law, and not getting any one to practice upon, he had given it up in disgust and migrated to the home of opportunity in hope of getting rich. But there was another reason—a woman.

During his idle hours, Allyn had fallen in love. And he took that very seriously also. It went hard with him, for he had nothing on earth except a few bonds an old aunt had left him, and the revenue from them did not amount to \$300 a year. At the rate his practice was increasing Methuselah would have been a youngster compared with Allyn, if he waited for the revenue from his profession to enable him to marry.

Nelly, however, looked at the matter in a very common sense light. Common sense was her strong point, until she met him. Then it deserted her, and an unreasoning love for him took its place. Still, even then, she had more of it left than he had to start with.

"Jim," she said, "you are acting very foolishly. What does it matter if you haven't any money? I don't want money—I've got enough, or will have, when I get control of it. The income from \$200,000 would keep us very nicely, and would hold us up until you could establish a paying practice. Now don't be silly."

"Nelly," he replied, solemnly, "I cannot afford to marry you now. People would say that I married you for your money—and I don't intend to put myself in a position where such a motive could be imputed to me. It would be unjust to me, and to you."

"Well, Jim," and there were tears in

her eyes. "I don't think you are acting fairly to me. Here I am, an orphan, with nobody on the earth to love except an old guardian—and I despise him. You've made me love you so that life without you will be worse than no life at all—and now you say you cannot marry me until you make what it took my father a lifetime to accumulate. Why, by that time, I'll have wrinkles, and, maybe, false teeth and glasses, and be a horrid, snuffy, fussy old woman."

"No, Nell. I don't want to make \$200,000—if I had \$100,000 it would be all right. And it will not take long—out west I will make it quickly. Just you stand fast, and wait for me."

"Oh, I'll wait, but I think you are hateful, and pig-headed, just the same. Would you marry me if I didn't have any money at all?"

"Yes, gladly, and we would be happy, too. We would manage, somehow. But now, my self-respect will not allow me."

So it was that he went to make his fortune, and at the same time, peace with his unduly active conscience. To his utter disgust, however, he found, after a year's prospecting, that gold mines were not at all plentiful, and that every foot of the mountains had been prospected over time and again. A year in Mexico assured him that the business of finding silver mines lying around loose had also played out long ago, and that it took lots of capital to start ranching on a paying basis. Funds were getting low, so he secured a place as one of the herdsmen of the XXX "outfit," and on account of his grave demeanor, was promptly named by the other cowpunchers "Sorrowful Jim"—and the name stuck to him.

During all his wanderings he had written to Nelly as regularly as possible, and had begun to regret in a measure his Puritanical conscience. At \$40 a month and grub, he did not see that a fortune was in immediate prospect. Absence had indeed made his heart grow fonder, and he longed for a sight of Nelly's laughing eyes and dimpled face.

Yet he would not acknowledge himself beaten, or that he would give in. Much against his inclination he remained, consumed with a desire to see her, yet impelled to remain in stiff-necked pride, acting as avant courier and escort for a lot of wild-eyed, long-horned steers, all the while cursing himself for a fool. So he and the rest of the outfit did not have very much in common together, and he grew more and more unsociable and lonely.

Small wonder was it, then, that when he received a letter from her, he felt that his voluntary exile was broken—his penance was done, and he was free to return to civilization and Nelly.

"You can come on, Jim, dear," the letter said; "that is, of course, if you care to take an almost dowdierless bride. I have now only enough left to bring me in \$300 a year—exactly what you had. I do not own another thing on earth. I have concluded that the money without you is not worth having, and as long as you are so stubborn about it, I saw that I must give in, so I have done so, gladly. I have gotten to be twenty-four, as you know, and have absolute control over my property. So, in order to get you, I have given away my fortune."

"You have cost me nearly \$200,000, so I am of the opinion that you had better come on and deliver yourself up as a victim. I don't propose to tell you another thing about it, as you have no right to know, now. After—after—oh, well, some time I will tell you what I did with the rest of the money, but just now it is no affair of yours. You will simply have to take my word for it. Come on, Jim, I am anxious to see you."

So it was that Jim was happy. He had only two more days to wait, then he would get his month's wages. He had \$400 saved up, and he reflected that he and Nell would manage to get along nicely on that for a while. His pride was riding rampant, also, and his conscience was very self-satisfied, indeed, for had he not held out against the allurements of beauty, wealth, posi-

tion, ease—everything? It was a victory well worth rejoicing over.

The ceremony was over, the few intimate friends had taken their departure, and Jim and Nell looked at each other in a bewildered sort of way.

"I think we ought to take a trip, Jim. I'm so deadly tired of this place I don't know what to do. Let's go to Europe. I've always wanted to go there."

"Nelly, are you daft? I can't afford a trip to Europe and you know it—and you haven't any money, either, so how are we to go?"

"I think it is very unkind of a person of your wealth to be taunting me with my poverty. For a man as rich as you, I think you are undoubtedly 'close.'" Her eyes twinkled merrily. "I want to go to Europe and now I've got you to go with me you ought to be glad of the opportunity."

"Nell, dear, if I could afford it you know I would be delighted to take you."

"Well, you can afford it."

"I tell you I cannot."

"I know better—you can. Why just look at these," and she handed him a bundle of books and papers. He picked up the first one and read from the inside page: "First National bank, in account with James M. Allyn. Deposited May 1, \$35,000; May 9, \$12,000; May 12, \$12,000."

"What does this mean, Nell?" he asked, wondering, as he looked at another book and read: "Received May 9, bonds, mortgages, stocks and securities, duly transferred and assigned to James M. Allyn and aggregating \$130,000, and more particularly described as follows. The Trust & Safe Deposit Company." Nelly was hugely enjoying the situation. She seated herself on the arm of his chair, and said:

"You dear old stupid, mulish, stubborn thing, I told you the truth, for I gave everything I owned to you before I wrote that letter. I told the truth, for I reserved just enough to bring me \$300 a year."

"Well, I'll be—!" She kissed him and stopped the word.

"Are we going to Europe?" she asked.

"Yes, I think I would enjoy the trip myself. But don't you think you paid too much for me?"

"Oh, I don't know; not as long as you are nice, as you are now. Come on—let's get ready and catch the steamer leaving to-morrow morning."—New Orleans Times-Democrat.

### Simple Science.

It is a fact that much suffering might be eliminated, in truth many lives spared, if some of the ideas relative to caring for small injuries were known to every household. A woman engaged in duties about the kitchen often gets a small cut upon her hands. It seems a trifle, and beyond binding a bit of cloth about it, she goes on with her work with no further thought of the matter. The very cloth she used may have dust, or objectionable matter in it, the cloth gets wet, and indeed she is fortunate if the wound heals quickly and well. It is often from the most insignificant wounds and scratches that blood poisoning sets in. The sole of the foot and palm of the hand are the most vulnerable parts of the body, and the result of neglecting wounds on them may result in lock-jaw.

When we remember the impurities floating in the air, in the soil, and in the very cleanest house we cannot but be surprised that there are not more cases of poisoning arising from these causes.

It is surely a very simple thing to keep in a bottle a weak solution of carbolic acid and water, such as any duggist can prepare for you. This mixture, which contains from 5% to 10% of carbolic acid, will disinfect any ordinary wound and keep out impurities. The wound should first be carefully washed, then wring out in boiling water a bit of soft cloth, and pour upon this steril-

ized cloth some of the carbolic acid and water. Bind up the cut or scratch and then put a clean dry cloth on the outside. In such a simple fashion you can prevent any serious result from a cut or scratch, or any wound when the skin is broken.

### Blood Poisoning.

In the widest acceptance of the term, blood poisoning occurs in all infectious diseases, in Bright's disease, biliousness, malaria and any other trouble affecting the general system. But, as usually understood, it means poisoning by pus microbes or their products, conditions medically known as pyæmia or septicæmia.

A quarter of a century ago these diseases were very common, especially in hospitals, and were often the cause of frightful mortality among the wounded in battle, but now they are becoming more and more rare, and many physicians of several years practice have never seen a well-marked case.

This happy change is the result of the general adoption of the principles of antiseptic surgery, whereby septic infection of wounds and consequent extensive suppuration are prevented. But blood poisoning still occurs at times after wounds made with infected objects, or wounds which have been allowed to fester without proper treatment.

Physicians occasionally get blood poisoning in consequence of a slight cut or scratch received while performing an autopsy after a case of appendicitis or other suppurative disease. In cases in which death follows an operation for appendicitis, the cause is frequently septicæmia or pyæmia, the operation having been undertaken too late to prevent the absorption of septic material.

The symptoms of blood poisoning are those of profound depression of the general system, but the symptoms of the two varieties of blood poisoning differ more or less.

Septicæmia usually begins abruptly with a chill and high fever. The pulse is quick and weak, the breathing is rapid and sometimes oppressed, headache is usually severe, the appetite is lost, and there is nausea with vomiting.

In pyæmia these symptoms are more gradual in their appearance, and are preceded for a day or two by slight fever, loss of appetite and general depression. There is a succession of chills, high fever and sweating, so that the case is sometimes mistaken for malaria. Later all doubt is removed by the formation of abscesses in various parts of the body.

Both forms of blood poisoning are grave, but recovery is more apt to take place in septicæmia. Treatment consists primarily in attention to the wound through which infection has occurred, which if accessible should be opened freely and thoroughly drained. At the same time the system must be supported by stimulants, heart tonics and nourishing and easily digestible food.—Youth's Companion.

AMATEUR FARMER: "Mr. Green, there seems to be something serious the matter with the horse I bought of you yesterday. He coughs and wheezes distressingly, and I think, perhaps, he is wind-broken. What would you advise me to do?" Horse Dealer (promptly): "Sell him as quickly as you can, jes' like I did."—Tit Bits.

SAID the teacher, "And it came to pass when the King heard it he rent his clothes. Now, what does that mean, children—he rent his clothes?" Up went a little hand. "Well if you know, tell us." "Please, ma'am," said the child, timidly, "I s'pose he hired 'em out."—Leslie's Weekly.

VISITOR: "Don't you think it's hard on your daughter to run that grain-drill out on the prairie every day?" Western Farmer: "Why, I didn't think it was anything unusual for a girl to do plain sowing."—Judge.

"WHY can't a man's nose be longer than 11 inches?" "Oh, if it were over 12 it would be a foot."—Yale Record.



## A Case of "Scatter-Brains."

"The trouble with Billy is he's scatter-brained."

As Mr. Lemmon said this he filled a dipper at the pump, and approached the teakettle. The tin lid was upside down and very hot. He gave it a hasty flip which landed it in the midst of the apple sauce simmering close by, and poured in the water triumphantly.

"Like to get scalded that time," he said, fishing out the teakettle lid. "It won't hurt the sauce, will it?"

"I don't believe it will. The dipper'll melt, Nathan, if you leave it on the stove empty."

"That's so." Mr. Lemmon rescued the dipper and made a fresh onslaught on the pump.

"Billy means well, if he would only keep his mind on the main thing," he went on. "He's anxious to help. I haven't told you what he did yesterday. I sent him to the toolbox for more nails. There was plenty of 'em there, but he took a notion that it would be a good thing if he was to sort over the whole box, and emptied everything out on the ground. I come to see what he was doing to keep him so long, and there he was swimmin' in tacks. Much as ever I can get things straightened out again."

Mrs. Lemmon laughed. She laughed easily. She was distinctly a genial person.

"I can't think where he gets it from," added Mr. Lemmon.

"He gets it from his father," answered Mrs. Lemmon, unexpectedly.

"Why, you don't say—" Mr. Lemmon turned around to see what she meant.

"Certainly I do. You're filling the kettle too full, Nathan; it's spilling over. Yes, you're both absent-minded. He can't get over it all in a minute. We must guide him some. Now, if you'll bring the horse around, I'll be ready to go as soon as the apple sauce is off the stove."

"Dear me, they're as helpless as kittens about some things," she thought affectionately, tying the strings of her Sunday bonnet in a firm, square bow.

She looked out of the window at Billy, a freckled-face boy of ten, who was tramping up and down beside the old horse. Mrs. Lemmon was Billy's stepmother, and he had decided opinions about her.

"She takes my part," Billy said. "She takes my pa's part, too. I don't know who's side she's on—everybody's I guess. She's great!"

"Ma, say, can I drive?" he asked, as she came.

"Course I expect you to drive. When a young man takes me to town, he has to do the driving."

Billy clambered into the wagon with an important air. Mrs. Lemmon stood waiting.

"There's another thing a young man's got to do that takes me to ride," she said, after a minute.

"What?"

"Turn the wheel out so I can get in."

"I forgot," responded Billy, sharply.

"Take care—take care! You'll be over on the other side of the road!" cautioned his father, coming up to the fence, anxiously. It was not the general custom to see one's wife off every time she went to the village. Mr. Lemmon did not know why he did it. "No, we're all right; well, goodbye!"

Mr. Lemmon looked after his wife's erect comely figure. "I guess they'll get where they say they will as long as she's in the wagon," he thought. "He was dreadful pleased to have the reins. She understands boys."

The place looked lonely to Mr. Lemmon as he went back to the chicken coop he was making. It was a good sized coop, with a door in the front for the hens to go in an out. He had laid the floor, and nailed on three sides the day before, and he regarded it with satisfaction. "She'll say it's a good job," he thought.

"Queer how she came to say what she did about Billy," he continued. "I've told him I don't know how many

times to just put his mind right on it—nail it right in. That's what Billy needs—"

And then for a time there were no sounds about the place but the sharp tap! tap! of the hammer.

It was dark when Mrs. Lemmon and Billy drove into the yard. Mr. Lemmon did not come out to take the horse.

"Pa said he might have to go down to the meadow before we get back," said Billy.

"You and I will have to unharness, then. Quick, now! I'm going to make you some waffles for supper."

"Can I grate some maple sugar to eat on 'em, ma?"

"Certainly. No, Billy, you don't want to undo all the straps, only just what's necessary."

"I get mixed up, ma."

"Well, get unmixed, then," said his stepmother, good naturedly.

It was strange that Mr. Lemmon should have the door wide open if he was going down to the meadow. She shut it, and laid her bundles on the table. Just then they heard a peculiar sound: Rat-a-tat! Rat-a-tat!

"What was that?" she exclaimed. She and Billy looked at each other, startled.

Rat-a-tat! Rat-a-tat!

Mrs. Lemmon flung open the cellar door. "Nathan, are you there?" she called.

"Ma-a!" came a feeble voice from the distance.

"It's outside," said Mrs. Lemmon. "I'm afraid he's hurt. Take this candle, Billy, and run on ahead."

Billy loped across the yard. She followed with the lamp. "What's the matter?" she called, alarmed, for Billy was capering up and down beside some whitish object, the candle lightening up his round face like a hobgoblin's.

"Ma! Pa's in the chicken coop!"

There could be no manner of doubt of it. His hammer resounded on the walls, and his muffled voice called crossly: "Let me out! let me out!"

Billy got on the ground and looked through the door. "I see him!" he cried, excitedly.

"Nathan Hale Lemmon, how came you there?" cried his wife.

"I should think you could see for yourself!"

She had seen in a flash, and leaning against the partition, she laughed till the tears came.

"You've been—you've been—oh, oh! —you've been and nailed that front on from the inside, and then—you couldn't get out through the door unless you was a chicken, which you're not—oh, my! my, my!"

"He! he!" snickered Billy.

"But why don't you knock in a board and get out?"

"Went the wrong way. Couldn't get any purchase," said the muffled voice.

"Oh Nathan, I shall give up!"

"Well, when you get through laughing, maybe you'll do something. I've been hollerin' here most all the afternoon."

"You poor man, you! Really, I feel weak! There, Billy, you stop! Run and bring the hatchet. Don't cut yourself."

It took but a few well-directed blows with the back of the hatchet to loosen a couple of boards. Through the narrow opening Mr. Lemmon squeezed out. He was one of the mildest of men, but when you have been shut up all the afternoon in a hen coop of your own making, you may be forgiven for being a little provoked.

It was a grand supper Mrs. Lemmon gave them, half an hour later; a supper fit for the minister, and no allusions made to late unpleasant experiences. Right in the midst of it, all three happened to look up at once; and then there was a fresh explosion. Mr. Lemmon helped himself to the last waffle. "Well, 'twas rather funny when you come to think of it," he assented, with a laugh.

That was all; only nowadays, when he worries over Billy's scatter-brains, his wife says, soothingly:

"Now, pa, you remember that chicken coop."—Youth's Companion.

## DOMESTIC ECONOMY.

## Rules for Canning and Preserving.

Where sugar is used at the time of canning, and the materials are cooked in a porcelain-lined kettle, the following rules should be closely observed: The jars must be washed, plunged into scalding water and rolled around quickly; the lids put into cold water, brought to a boiling point and kept there; the rubbers adjusted; the jars filled one at a time and fastened. Each jar should be placed, to prevent breakage, on a folded damp towel in a plate or pie dish. A wide-mouthed funnel will facilitate matters very much. The jars should be filled to overflowing and the tops fastened down. There is no advantage whatever in having a press of any sort in the top of the jar. It is not necessary that the fruit should be under the liquor. Fruits that will mould outside of the liquor in a jar are not sterile, are unwholesome and have been carelessly canned.

**CURRENTS AND RASPBERRIES.**—To each full quart of large red raspberries allow half a pint of currant juice and half a pound of sugar. Put the berries into a porcelain-lined kettle—a layer of berries and a layer of sugar; pour over the currant juice. Bring the fruit slowly to boiling point; skim, and fill into the cans.

**PLUMS.**—The following receipt will answer for gages and all sorts of plums. Where sugar is used, allow half a pound to every pound of plums. Wash the plums, stick them carefully with a large pin to prevent the skin from cracking. Weigh. Put a layer of sugar and a layer of plums into a porcelain-lined kettle, having not more than four layers of plums. Let them stand for an hour or two on the table; then put them over a moderate fire; bring very slowly to boiling point; skim, and fill into jars as described.

There is always a great deal of surplus juice in canning plums and small fruits, and this may be put aside to boil down for jelly.

**CANNING VEGETABLES.**—All vegetables are better when cooked in jars; in fact, I doubt if any one can cook corn or peas in a kettle and put them into jars, and have them keep. See that the jars are washed thoroughly, the rubbers adjusted, the lids put into cold water and brought to boiling point. Corn must be freshly gathered, cut from the cob as soon as possible, packed into the jars, the rubbers adjusted, the tops put on loosely. Stand the jars in wash-boiler, the bottom of which has been protected with a rack of strips of wood. Surround them partly with cold water; cover the boiler, bring to boiling point and boil continuously for four hours. Lift one jar at a time, and fasten on the top at once.

**PEAS.**—Select very young peas, before the starch is developed. Shell them; pack them into the jars; fill the jars with cold water; adjust the rubbers; put on the tops loosely. Surround them with cold water; bring to boiling point, and boil for three hours after they begin to boil.

Young lima beans, string beans, beets, small turnips and carrots may be canned in precisely the same way, allowing three hours for the young lima beans, and an hour and a half for each of the other vegetables.

**ASPARAGUS.**—Wash the asparagus; throw it into the boiling water, and boil rapidly for ten minutes. Put it into the jars heads up; fill the jars with cold water; adjust the rubbers, and cook for one hour and a half; fasten as directed in the directions for canning fruit.

**WHOLE TOMATOES.**—Select plump, small, round tomatoes. Scald them by putting them into a wire basket and plunging them down once or twice in boiling water. Remove the skins and put the tomatoes into the jars. Add a teaspoonful of salt; fill the jars with cold water; adjust the rubbers; put the jars in the boiler as directed in preceding receipts; boil for ten minutes after they reach the boiling point.

Tomatoes, being acid, should be peeled, stewed in a porcelain-lined ket-



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tle, and filled into the jars through a wide-mouthed funnel as directed for fruits. Tomatoes are the most easily kept of all vegetables.

**PRESERVED QUINCES.**—Pare the quinces, cut them into rounds or into thin slices, saving all the rougher pieces with the skin for jelly. Put the quinces into a porcelain-lined kettle, and just cover with cold water, bring to boiling point and cook slowly until tender. Drain, saving this water to cook with the skins and rough pieces for jelly. Weigh the quinces, and to each pound allow half a pound of sugar. Put the sugar into a porcelain-lined kettle, add just a little of the water in which the quinces were boiled, bring to the boiling point and skim. Throw in the quinces and cook slowly until they are a dark red and perfectly transparent. Lift carefully, a piece at a time, and put them into tumblers or jars, and cover with boiling syrup. Quinces preserved in this way may be drained, the syrup in which they were cooked saved for jelly making, and the quinces dried on a sieve, rolled in granulated sugar, and put aside to use as a conserve.—Mrs. Rorer, in Ladies' Home Journal.

## Hints to Housekeepers.

Borax sprinkled on pantry shelves is a good remedy to drive away ants.

Mice object to camphor gum, and it is a good plan to sprinkle it around their haunts.

To construct a "friendship calendar," cut smooth paper slips for 365 pages, mark on them the days of the month and week and distribute them among as many different friends as possible for an autographic sentiment. Then arrange them in rotation, block and gum them, paste to a piece of cardboard, which may be hand-painted, and then punch to hang on the wall.

Fresh tomatoes are anti-bilious, and thus not only wholesome for healthy people, but may be used with advantage in many cases of fever. Dio Lewis used to say that he expected to see the day when tomatoes would take their place in the pharmacopœia among established remedies for fever. Fresh tomatoes, gathered from the vine before the sun is on them, are excellent for dyspeptics. They should be eaten without seasoning, or, at most a little salt.

The enlarged pores of the skin can be remedied by simple means, if one has patience. The face should be bathed every night for ten minutes in reasonably hot, not merely warm, water. It is better to use a Turkish towel for the purpose, and rub softly with an upward motion, from the chin. Soap of the purest quality, preferably an almond or olive oil soap, should be employed. Afterwards, a little cold cream may be applied. In the morning the face should be well bathed with cold water, to restore firmness to the muscles. This treatment, faithfully given, has never been known to fail to cure enlargement of the pores in about six months. The same method will remove the roughness of upper arm that sometimes troubles one who wears evening dress cut de-collete.



# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Aug. 7, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Dec.
Wednesday.....	68 1/2 @ 69	70 1/4 @ 71
Thursday.....	67 1/4 @ 69 1/4	69 1/4 @ 71 1/4
Friday.....	69 1/4 @ 69 1/4	71 1/4 @ 70 1/4
Saturday.....	68 1/4 @ 69 1/4	70 1/4 @ 72
Monday.....	68 1/4 @ 70 1/4	71 1/4 @ 73 1/4
Tuesday.....	70 1/4 @ 69 1/4	73 @ 72 1/4

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	5s 6 1/4 d	5s 8 d
Thursday.....	5s 6 1/4 d	5s 8 d
Friday.....	5s 7 d	5s 8 1/2 d
Saturday.....	*-s -d	-s -d
Monday.....	*-s -d	-s -d
Tuesday.....	5s 8 1/4 d	5s 9 1/4 d

\*Holiday.

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 00 1/4 @ 1 01 1/4	1 04 1/4 @ 1 04 1/4
Friday.....	1 01 1/4 @ 1 01 1/4	-@-
Saturday.....	1 02 1/4 @ 1 01 1/4	1 05 1/4 @ -
Monday.....	1 03 @ 1 02 1/4	1 06 1/4 @ -
Tuesday.....	1 02 1/4 @ 1 01 1/4	1 06 1/4 @ 1 05 1/4
Wednesday.....	1 02 1/4 @ -	-@-

## WHEAT.

The market has not displayed much activity during the week under review, and most of the time has ruled more favorable to the buying than to the selling interest, both here and abroad. Only 18,260 tons went outward from this port during the month of July, while for corresponding month last year the wheat clearances from this port aggregated 33,900 tons, showing a falling off in exports of nearly 50 per cent. A better record, however, will probably be made the current month, as the chartered fleet now in port shows a carrying capacity of about 60,000 tons, and most of the vessels in question should be bound outward within the next thirty days. Some wheat is going to South America per steamer, a shipment of 25,760 centals being thus made to Peru the current week. Ocean freight rates for wheat are without special change, recent charters having been within range of £1 17s. to £1 18s. 9d. for iron ships to Queenstown for orders, usual option as to final destination. The visible supply of wheat in the United States east of the Rockies is given at 30,469,000 bushels, indicating a decrease of 1,199,000 bushels for the week.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.00 1/4 @ 1.03.
May, 1902, delivery, \$1.04 1/4 @ 1.06 1/4.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.02 3/4 @ -; May, 1902, -.
California Milling, old.....\$1 00 @ 1 03 1/4
Cal. No. 1 shipping, alongside.....95 @ 97 1/4
Oregon Valley.....97 1/4 @ 1 02 1/4
Washington Blue Stem.....1 00 @ 1 02 1/4
Washington Club.....97 1/4 @ 1 00
Off qualities wheat.....95 @ 97 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s 2d @ 6s 2 1/4 d	6s 0d @ 6s 0 1/4 d
Freight rates.....	37 1/4 @ 40s	37 1/4 @ 40s
Local market.....	\$1 05 @ 1 07 1/4	96 1/4 @ 98 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on August 1st and July 1st:

Tons—	Aug. 1st.	July 1st.
Wheat.....	*70,868	64,359
Barley.....	†40,649	14,662
Oats.....	3,281	1,558
Corn.....	342	470

\*Including 45,734 tons at Port Costa, 24,163 tons at Stockton.

†Including 30,277 tons at Port Costa, 7882 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show an increase of 6509 tons for the month of July. A year ago there were 127,165 tons wheat in Call Board warehouses.

## FLOUR.

Values are without quotable improvement. Considerable flour has been shipped the past week, one steamer taking 18,000 barrels for South America. The last steamer sailing for the Orient had 12,000 barrels for China and Japan.

Business on local account, however, has been unusually light.

Superfine, lower grades.....	82 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

While the market is far from lifeless, the amount of barley changing hands can not be termed heavy, as compared with the quantity offering. That there will be a tolerably free movement outward during the next five or six months is altogether probable. Some shipments are now being made, both by sea and rail. A German steamer on the Cape Horn route, sailing this week, took 1,100 tons barley for England. Some of the vessels now waiting at Port Costa will take barley as whole or part cargo. Business in feed descriptions on local account was not brisk. Prices throughout were without noteworthy change, and there is nothing to warrant anticipating any marked fluctuations in the near future.

Feed, No. 1 to choice.....	72 1/4 @ 73 1/4
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	77 1/4 @ 82 1/4

## OATS.

Market shows a generally healthy tone, with fairly active demand at prevailing values. Spot stocks continue to be mainly colored descriptions, although white oats are beginning to put in an appearance in wholesale quantity, and increased offerings of same are looked for in the near future.

White Oats, fancy feed.....	1 17 1/2 @ 1 22 1/2
White, good to choice.....	1 10 @ 1 15
White, poor to fair.....	97 1/2 @ 1 05
Gray, common to choice.....	1 00 @ 1 10
Milling.....	1 20 @ 1 25
Surprise, good to choice.....	1 20 @ 1 25
Black Russian.....	85 @ 1 00
Red.....	90 @ 1 15

## CORN.

Supplies of this cereal continue of light volume, both of domestic and imported product. Market is firm throughout, and gives poor prospects of soon being especially favorable to the buying interest.

Large White, good to choice.....	1 60 @ 1 65
Large Yellow.....	1 55 @ 1 60
Small Yellow.....	1 65 @ 1 70
Eastern, in bulk (carload lots).....	1 55 @ -

## RYE.

Some purchases have been made for export at 75¢ @ 77 1/2¢. Local millers are doing very little buying.

Good to choice, new.....	77 1/4 @ 80
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## BUCKWHEAT.

Scarcely anything doing, and values in consequence are for the time being not very well defined.

Good to choice.....	1 50 @ 1 75
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## BEANS.

There is a fair amount of business doing, considering the limited offerings and the fact that the season is nearly ended, although it will be probably sixty days before new beans will be offering in noteworthy quantity. Market shows firmness for most varieties, with quotations advanced for most kinds, notably for Pinks. Some holders of above named variety are contending for more than highest figures quoted. Limas are being held very stiffly, with spot stocks of small volume. Lady Washingtons are in fair supply, but are not being offered at as favorable rates to buyers as were current a few weeks ago.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 85 @ 5 00
Lady Washington.....	3 85 @ 4 00
Pinks.....	2 00 @ 2 10
Bayos, good to choice.....	2 50 @ 2 75
Reds.....	3 00 @ 3 25
Red Kidney.....	4 25 @ 4 50
Limas, good to choice.....	6 40 @ 6 50
Black-eye Beans.....	3 25 @ 3 50
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

## DRIED PEAS.

The market remains quiet, but for choice to select Green or Blue is moderately firm at the quotations. Some common Sacramento river Green peas are offering at comparatively low figures and at less than quotations for prime stock. For Niles peas there is no special inquiry at present.

Green Peas, California.....	2 25 @ 2 50
Niles Peas.....	1 50 @ 1 75

## WOOL.

A good demand is being experienced for all free wools, and market is firm at current quotations. There is very little desirable wool now remaining unplaced in local warehouses. Considerable purchasing has been done lately in the interior, and in some instances at higher figures than are warranted as quotations in this center.

## SPRING.

Humboldt and Mendocino.....	14 @ 16
Humboldt and Mendocino Lambs.....	11 @ -
Northern, free.....	12 @ 13

Northern, defective.....	10 @ 11
Middle Counties, free.....	10 @ 11
Middle Counties, defective.....	9 @ 10
Southern, 12 mos.....	8 @ 9
Southern, free, 7 mos.....	7 @ 10
Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Mountain, free.....	8 @ 10
San Joaquin and Plains.....	7 @ 9
San Joaquin Lambs.....	7 1/4 @ 9

## HOPS.

Values are wholly nominal, there being practically nothing doing in old stock, supplies of latter being about exhausted, and new have not yet begun to come forward. Prospects for new are favorable for a tolerably firm market at the opening of the season, with likelihood of prices being established about as below quoted.

Good to choice 1901 crop.....	13 @ 15
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## HAY AND STRAW.

Receipts of hay have been of much the same light proportions as during preceding week, the strikes of teamsters and others interfering with receiving and delivering. Small dealers who did their own hauling were accommodated with all they required, prices continuing at practically the same range as had been ruling. Straw market was quiet at quotably unchanged rates.

Wheat, good to choice.....	7 50 @ 10 00
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 00 @ 8 50
Alfalfa.....	7 00 @ 9 00
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 1/2 bale.....	25 @ 42 1/4

## MILLSTUFFS.

Bran and Middlings are in very light supply and are commanding stiff prices, but not much stock of either description is required to satisfy the demand at full current rates. Rolled Barley is ruling steady, with spot supplies of moderate volume. Market for Milled Corn continues unfavorable to buyers.

Bran, 1/2 ton.....	19 00 @ 20 00
Middlings.....	22 00 @ 23 00
Shorts, Oregon.....	19 00 @ 21 00
Barley, Rolled.....	17 00 @ 17 50
Cornmeal.....	32 00 @ -
Cracked Corn.....	33 00 @ -

## SEEDS.

No new features have been developed since last report. Most kinds quoted herewith are offering so sparingly, and there is so little business transpiring, that values for the time being are not very clearly defined, quotations being largely nominal.

	Per ctt.
Flax.....	2 50 @ 3 00
	Per lb.
Canary.....	3 1/4 @ 3 1/2
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

## BAGS AND BAGGING.

The call for Grain Bags is now light, as is to be expected at this date. Most of the business is at 8c, although in the filling of small orders an advance of 1/2c to 1c is asked. Wool Sacks are in fair request on account of Fall clip and are bringing as a rule full current figures.

Calcutta Grain Bags, spot.....	8 @ 8 1/4
San Francisco Grain Bags, 22x36, spot.....	8 @ 8 1/4
Wool Sacks, 4 lbs.....	31 @ 36
Wool Sacks, 3 1/2 lbs.....	32 @ 34
Fleece Twine.....	7 1/2 @ -
Gunnies.....	- @ 12 1/2
Bean Bags, cotton.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/2 @ 7 1/4

## HIDES, PELTS AND TALLOW.

The Hide market is weak and tending downward, in sympathy with recent declines in the East. Values for Pelts are barely steady, the demand not being active. Tallow is in fair demand for shipment and prices are being tolerably well maintained.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/4 @ -	9 @ -
Medium Steers, 48 to 56 lbs.....	9 1/4 @ -	8 @ -
Light Steers, under 48 lbs.....	8 1/4 @ 9	8 @ -
Heavy Cow Hides, over 50 lbs.....	9 @ -	8 @ -
Light Cow Hides, under 50 lbs.....	8 1/4 @ 9	8 @ -
Wet Salted Kip.....	9 1/4 @ -	8 1/4 @ -
Wet Salted Veal.....	9 1/4 @ -	8 1/4 @ -
Wet Salted Calf.....	10 @ -	9 @ -
Dry Hides.....	16 @ -	14 @ -
Dry Kip and Veal, 11 to 16 lbs.....	16 @ -	13 @ -
Dry Calf, under 4 lbs.....	17 @ -	15 @ -
Salted Horse Hides, large.....	2 50 @ -	- @ -
Salted Horse Hides, medium.....	2 00 @ -	- @ -
Salted Horse Hides, small.....	1 00 @ -	- @ -
Dry Horse Hides, large.....	1 75 @ -	- @ -
Dry Horse Hides, small.....	1 00 @ 1 25	- @ -
Dry Colts' Hides.....	50 @ -	- @ -
Pelts, long wool, 1/2 skin.....	75 @ 1 00	- @ 75
Pelts, medium, 1/2 skin.....	50 @ 75	- @ 50
Pelts, short wool, 1/2 skin.....	30 @ 40	- @ 30
Pelts, shearling, 1/2 skin.....	10 @ 25	- @ 10

Deer Skins, best summer.....	35 @ -
Deer Skins, good medium.....	- @ 30
Deer Skins, thin winter.....	- @ 10
Elk Hides.....	10 @ 12
Tallow, good quality.....	4 1/4 @ 4 1/2
Tallow, No. 2.....	4 @ 4 1/4
Goat Skins, perfect.....	30 @ 37 1/4
Goat Skins, damaged.....	10 @ 20
Kid Skins.....	5 @ 10

## HONEY.

The market shows the same quiet state as for some time past, bids of wholesale operators not being of a character to encourage free consigning from producing points. The German steamer Hermonthos, sailing this week via the Cape Horn route for Europe, took 152 cases Extracted honey, destined for Germany.

Extracted, White Liquid.....	5 1/4 @ -
Extracted, Light Amber.....	4 1/4 @ 5
Extracted, Amber.....	4 @ 4 1/4
White Comb, 1 lb frames.....	11 @ 12 1/4
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7 1/4

## BEEWAX.

Not much on market of any description. Current values are being well sustained.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Quotable values for Beef remain practically as last noted, but market cannot be termed firm. Mutton is in fair supply and the demand moderate at quotably unchanged values. Previously quoted figures on Veal and Lamb continued in force, with receipt of both descriptions of rather small proportions. Hog market showed steadiness, although arrivals and offerings of domestic grain fed were on the increase.

Beef, first quality, dressed, net 1/2 lb.....	6 1/4 @ 6 1/2
Beef, second quality.....	6 @ 6 1/4
Beef, third quality.....	5 1/2 @ -
Mutton—ewes, 6 1/2 @ 7c; wethers.....	7 @ 7 1/4
Hogs, hard grain fed, medium.....	6 1/2 @ 6 1/4
Hogs, small, fat.....	6 1/2 @ 6 1/4
Hogs, large, hard.....	5 1/2 @ 6
Hogs, country dressed.....	7 1/4 @ 7 1/2
Veal, small, 1/2 lb.....	9 @ 10
Veal, large, 1/2 lb.....	8 @ -
Lamb, spring, 1/2 lb.....	8 @ 9

## POULTRY.

Market was moderately firm during the early portion of the week under review, especially for choice young stock, such being in light receipt and in good request, and if particularly desirable as to size and condition, brought higher figures in some instances than were warranted as regular quotations. During the past few days the tendency has been to easier figures on most kinds of poultry, mainly due to increased arrivals of Eastern.

Turkeys, live hens, 1/2 lb.....	9 @ 10
Turkeys, live gobblers, 1/2 lb.....	8 @ 9
Hens, California, 1/2 dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 50 @ 6 00
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 00 @ 2 50
Ducks, old, 1/2 dozen.....	2 50 @ 3 00
Ducks, young, 1/2 dozen.....	3 00 @ 4 00
Geese, 1/2 pair.....	1 12 1/2 @ 1 25
Goslings, 1/2 pair.....	1 12 1/2 @ 1 37 1/2
Pigeons, old, 1/2 dozen.....	1 50 @ 1 75
Pigeons, young.....	1 25 @ 1 50

## BUTTER.

A firmer market has been developed for choice to select fresh, the production being on the decrease, as is to be expected at this time of year. Common and defective qualities are not bringing materially improved figures, although not offering in heavy quantity. Held butter is in liberal stock and is expected to soon enter freely into consuming channels.

Creamery, extras, 1/2 lb.....	23 @ -
Creamery, firsts.....	19 @ 21
Dairy, select.....	19 @ 20
Dairy, firsts.....	17 1/2 @ 18
Dairy, seconds.....	16 @ -
Mixed store.....	12 @ 15
Creamery in tubs.....	18 1/2 @ 20
Firkin, California, choice to select.....	17 @ 19
Firkin, common to fair.....	15 @ 16

## CHEESE.

Quotable values have been advanced about half a cent since last review, with market firm at the improved figures. Stocks of all descriptions are light and are not likely to prove excessive during the balance of the season.

California, fancy flat, new.....	10 @ 11
California, good to choice.....	9 1/4 @ 10
California, fair to good.....	9 @ 9 1/4
California Cheddar.....	- @ -
California, "Young Americas".....	10



California, good to choice store..... 16 @19  
 Eastern, good to choice..... 16 @20

## VEGETABLES.

Most kinds of vegetables in season were in fairly liberal receipt and the general trend of values was in favor of the consuming interest. Onions proved an exception, moving off a little better than for week preceding and selling to slightly better advantage. Tomatoes sold at a sharp decline. Cucumbers, Squash, Peppers and Egg Plant were all in liberal stock and were offered at easy figures.

Asparagus,  $\frac{1}{2}$  box..... 1 00 @2 25  
 Beans, String,  $\frac{1}{2}$  lb..... 1 1/4 @ 2 1/2  
 Beans, Lima,  $\frac{1}{2}$  lb..... 4 @ 5  
 Beans, Wax,  $\frac{1}{2}$  lb..... 2 @ 3  
 Cabbage, choice garden,  $\frac{1}{2}$  100 lbs... 35 @ 40  
 Cauliflower,  $\frac{1}{2}$  dozen..... 40 @ 50  
 Corn, Green,  $\frac{1}{2}$  sack..... 30 @ 60  
 Corn, Green, Alameda,  $\frac{1}{2}$  large crate. 75 @1 25  
 Cucumbers, Bay,  $\frac{1}{2}$  large box..... 25 @ 40  
 Egg Plant,  $\frac{1}{2}$  box..... 35 @ 60  
 Garlic,  $\frac{1}{2}$  lb..... 2 @ 3  
 Okra, Green,  $\frac{1}{2}$  box..... 50 @ 75  
 Onions, Yellow Danver,  $\frac{1}{2}$  cental.... 90 @1 00  
 Peas, Sweet garden,  $\frac{1}{2}$  lb..... 2 @ 2 1/2  
 Peas, good to choice,  $\frac{1}{2}$  sack..... 75 @1 25  
 Peppers, Green Chile,  $\frac{1}{2}$  sack..... 40 @ 50  
 Peppers, Bell,  $\frac{1}{2}$  box..... 50 @ 75  
 Squash Summer,  $\frac{1}{2}$  small box..... 20 @ 30  
 Summer Squash, Bay,  $\frac{1}{2}$  large box... 50 @ 75  
 Tomatoes, River,  $\frac{1}{2}$  large box..... 50 @ 75  
 Tomatoes,  $\frac{1}{2}$  small box..... 20 @ 30

## POTATOES.

There was a fairly active inquiry for potatoes from Eastern points and local demand was of moderate volume. Receipts and offerings were not particularly large, neither could great quantities be handled to advantage, owing to the limited number of teams available for moving freight. Values for potatoes were maintained very close to figures of preceding week, market closing firm.

Burbanks, Salinas,  $\frac{1}{2}$  100 lbs..... 1 25 @1 50  
 River Burbanks, in boxes,  $\frac{1}{2}$  cental. 1 15 @1 50  
 River Burbanks, in sacks,  $\frac{1}{2}$  cental.. 1 00 @1 30  
 Mission Garnet Chile, in sacks..... 90 @1 15  
 Sweets, new,  $\frac{1}{2}$  cental..... 1 50 @2 00

## The Fruit Market.

## FRESH FRUITS.

Considering the difficulties experienced in moving fruit in wholesale fashion, on account of the continued strikes of teamsters and other labor organizations connected with the handling of freight, the market for fresh fruits has shown fairly healthy condition. Somewhat heavier quantities were disposed of than during previous week and at fully as good average prices. Apples were not in large receipt and market for best qualities was moderately firm at the quotations. Apricots were in greatly reduced supply, the season for this fruit being nearly ended. Peaches were not in excessive stock and custom could have been secured at full figures for more good to choice than arrived. Pears were in tolerably fair receipt, but all of desirable quality were promptly taken care of. Plums cleaned up fairly well between demand from canners and retailers, prices ruling steady for all desirable stock. Grapes were in increased receipt, and nearly all varieties sold at much the same general range of values, \$1.25 being about the top figures quotable for crates, and sales of boxes under 65c. were the exception. Figs were so scarce as to be hardly quotable. Melons of all kinds were in good supply and reasonable in price. Berries were in reduced receipt, but values were without special improvement.

Apples, Gravenstein,  $\frac{1}{2}$  4-tier box... 90 @ 1 15  
 Apples, Red Astrachan,  $\frac{1}{2}$  50-lb. box. 50 @ 1 00  
 Apples, green,  $\frac{1}{2}$  small box..... 20 @ 35  
 Apricots, Royal,  $\frac{1}{2}$  box..... 30 @ 50  
 Blackberries,  $\frac{1}{2}$  chest..... 3 50 @ 5 00  
 Cantaloupes,  $\frac{1}{2}$  crate..... 50 @ 1 00  
 Crahapples,  $\frac{1}{2}$  small box..... 35 @ 50  
 Grapes, Seedless,  $\frac{1}{2}$  crate..... 1 00 @ 1 50  
 Grapes, Black,  $\frac{1}{2}$  crate..... 80 @ 1 25  
 Grapes, Fontainebleau,  $\frac{1}{2}$  crate..... 75 @ 1 25  
 Grapes, Muscat,  $\frac{1}{2}$  crate..... 90 @ 1 25  
 Grapes, Tokay,  $\frac{1}{2}$  crate..... 1 00 @ 1 25  
 Logan Berries,  $\frac{1}{2}$  chest..... 5 00 @ 6 00  
 Nectarines,  $\frac{1}{2}$  box..... 40 @ 75  
 Nutmeg Melons,  $\frac{1}{2}$  crate..... 35 @ 75  
 Peaches,  $\frac{1}{2}$  box..... 30 @ 60  
 Pears, Bartlett,  $\frac{1}{2}$  ton..... 50 00 @ 30 00  
 Pears, Bartlett's,  $\frac{1}{2}$  40-lb. box..... 50 @ 1 00  
 Pears, other kinds,  $\frac{1}{2}$  box..... 35 @ 60  
 Plums, Green Gage,  $\frac{1}{2}$  ton..... 10 00 @ 15 00  
 Plums, large size,  $\frac{1}{2}$  ton..... 15 00 @ 20 00  
 Plums,  $\frac{1}{2}$  box..... 40 @ 75  
 Prunes,  $\frac{1}{2}$  box..... 40 @ 75  
 Raspberries,  $\frac{1}{2}$  chest..... 5 00 @ 7 00  
 Strawberries, Longworth,  $\frac{1}{2}$  chest.. 4 00 @ 6 00  
 Strawberries, Large,  $\frac{1}{2}$  chest..... 4 00 @ 4 50  
 Watermelons,  $\frac{1}{2}$  100..... 6 00 @ 25 00  
 Whortleberries,  $\frac{1}{2}$  lb..... 6 @ 8

## DRIED FRUITS.

The firmness of the market for cured and evaporated fruits is still more pronounced than at date of last review. Inquiry has seldom if ever been more active than during the past fortnight, and large quantities have changed hands of both old and new product at steadily hardening values. Last year's product is now practically a thing of the past, aside from some large Prunes, so far as offerings from first

or wholesale hands are concerned. The Prunes still held by the Association are practically out of the market for the time being, quotations on them having been withdrawn. They could be readily placed at full figures lately asked, but they are being held for and will undoubtedly command more money, the exact figures to be determined later on, when the present season's output and the prospective requirements can be calculated on more closely than at this date. All new fruits coming forward are being eagerly sought after, mainly on Eastern and foreign account, with transfers in many instances at a slightly higher range of values than generally quoted. Germany has been buying freely of old Prunes and new Apricots. Eastern buyers are in the market for all varieties of dried fruit. Transfers have been largest of Peaches, these being offered in heaviest quantity, but the demand is ahead of offerings, and prices have advanced fully 2c from opening figures. Values for Apples and Apricots have also appreciated to a marked degree, with no lack of custom at the improved prices. Little has been so far done in Plums, few having been yet presented for sale. For prime Red Plums, pitted, 5c is an inside wholesale figure at this date. Pears are too scarce at present to quote, but there is every prospect that desirable qualities will command comparatively fancy figures this season. Not for a long time has the dried fruit market throughout shown such a generally encouraging condition for the producing interest as at present.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime..... 7 1/2 @ 8  
 Apricots, Royal, choice, in sacks,  $\frac{1}{2}$  lb. 8 1/2 @ 9  
 Apricots, Moorpark..... 9 @ 11  
 Apples, in 50-lb boxes, rings, pressed, fancy..... 7 @—  
 Apples, 50-lb boxes, rings, pressed, good to choice..... 6 @—  
 Nectarines,  $\frac{1}{2}$  lb..... 5 @ 7 1/2  
 Peaches, unpeeled, fancy..... 7 1/2 @ 8  
 Peaches, unpeeled, choice..... 6 @ 6 1/2  
 Peaches, peeled, in boxes..... 12 @ 14  
 Plums, Black, pitted..... 4 @ 4 1/2  
 Plums, White and Red..... 5 @—  
 Prunes, Silver..... 4 1/2 @ 6

## COMMON SUN-DRIED.

Apricots..... 5 1/2 @ 6 1/2  
 Apples, sliced..... 2 1/2 @—  
 Apples, quartered..... 2 1/2 @ 3  
 Figs, Black..... 3 @ 3 1/2  
 Figs, White..... 3 1/2 @ 4  
 Peaches, unpeeled..... 4 @ 5  
 Pears, prime halves..... @—

## RAISINS.

With stocks exhausted in the hands of the Growers' Association, there remains nothing to quote until values shall be fixed for coming crop. Prices reported paid by packers for the clean-up are \$71 per ton on 3-crown standard Muscatels, \$70 per ton for 2-crown standards and all grades of Pacifics, \$40 per ton for Orientals or the poorest of the graded raisins, and \$30 per ton for all inferior stock, serviceable for little else than the manufacture of wine and brandy.

## CITRUS FRUITS.

Oranges are still around in market place and corner fruit stand, but the quantity is not great, and if they were out of sight just now they hardly would be missed. If there is a time for everything, August cannot well be claimed for Oranges nor March for Bartlett Pears. Lemon market is firm at the advanced quotations, with demand fair and offerings light. Limes have been inclining against buyers, with only moderate quantities in stock.

Oranges—Valencias,  $\frac{1}{2}$  box..... 3 00 @ 3 50  
 Lemons—California, select,  $\frac{1}{2}$  box..... 3 50 @—  
 California, good to choice..... 2 50 @ 3 00  
 California, common to fair..... 1 50 @ 2 00  
 Limes—Mexican,  $\frac{1}{2}$  box..... 7 00 @ 7 50

## NUTS.

The Davisville Almond Growers' Association, through bids opened on Saturday last, is reported to have sold this year's pooling to the J. K. Armsby Co. at 13 1/2c for Nonpareils, 11 1/2c for I. X. L.'s, 11 1/2c for Ne Plus Ultras, 9 1/2c for Drake's, and 9 1/2c for Languedoc's. The sale of the Brentwood Association is announced for next Saturday, the 17th. The Walnut crop is in most sections in this State in about best possible condition for present date, but is not yet wholly beyond the danger line. Prices for Walnuts remain undetermined. The Peanut market is ruling steady, with no great quantities in stock, either domestic or imported.

California Almonds, shelled..... 18 @ 22  
 California Almonds, paper shell,  $\frac{1}{2}$  lb..... 12 @ 14  
 California Almonds, soft shell..... 10 @ 12  
 California Almonds, hard shell..... 6 @ 7  
 Peanuts, California, fair to prime..... 4 1/2 @ 5 1/2  
 Peanuts, Eastern, hand-picked..... 5 1/2 @ 6  
 Pine Nuts..... 5 @ 6

## WINE.

Market shows practically the same condition as at date of last review. With virtually no offerings at present from first hands, wholesale values for the time being are necessarily largely nominal. There is a firm tone to the market, and every

prospect of profitable prices prevailing throughout the season for both wine grapes and wine. Nominal quotations for dry wines of last season's vintage remain 22 @ 25c. per gallon. Stocks of wines in the hands of wholesalers and jobbers are of comparatively small volume.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{4}$ sacks..... 138,196	511,563	565,383
Wheat, centals..... 21,300	437,305	664,418
Barley, centals..... 51,060	252,210	353,109
Oats, centals..... 29,000	100,421	86,958
Corn, centals..... 1,500	11,630	4,317
Rye, centals..... 300	2,705	4,180
Beans, sacks..... 4,930	9,361	14,032
Potatoes, sacks..... 23,458	114,350	117,887
Onions, sacks..... 10,221	28,483	16,609
Hay, tons..... 2,223	15,828	22,489
Wool, bales..... 1,901	7,814	2,890
Hops, bales..... 10	11	101

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{4}$ sacks..... 9,880	277,820	314,676
Wheat, centals..... 1	365,242	650,502
Barley, centals..... 4	30,063	64,275
Oats, centals..... 185	525	10,960
Corn, centals..... 505	4,379	...
Beans, sacks..... 18	477	2,395
Hay, hales..... 190	300	165
Wool, pounds..... ..	168,700	233,621
Hops, pounds..... 50	13,068	7,103
Honey, cases..... 20	317	90
Potatoes, pack's... 299	5,559	1,615

## California Dried Fruit at New York.

NEW YORK, Aug. 7.—Evaporated apples, common, 4 1/2 @ 7c; prime wire tray, 7 @ 7 1/2c; choice, 7 1/2 @ 8c; fancy, 8 @ 8 1/2c.  
 California Dried Fruits.—Market firm, with a good demand, and offerings light.  
 Prunes, 3 1/2 @ 7c.  
 Apricots, Royal, 8 1/2 @ 13c; Moorpark, 9 1/2 @ 14c.  
 Peaches, unpeeled, 7 @ 10c; peeled, 11 @ 14c.

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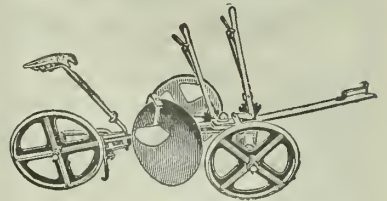
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All the plow manufacturers have been making experiments of this style of plow, and this is evidence that they see sufficient merit in the principle of the disc plow to try to determine if they can make the plow so that it will do good work under all conditions. The Benicia Agricultural Works of Benicia, Cal., evidently have struck upon the right model, for they have placed orders to put up over 1000 of these plows for next season. From all accounts, it will be a surprise to other disc plow manufacturers, and many applications for agencies are already being made to the selling agents, Baker & Hamilton, San Francisco, Sacramento, Los Angeles.

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Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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(ESTABLISHED 1860.)

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## THE STOCK YARD.

### Skim-Milk Calves in the Feed Lot.

Feeders find that the average skim-milk calf does not make profitable gains in the feed lot and will not buy him. Farmers find that the difference in price between an ordinary skim-milk calf and one that has run with the cow is frequently greater than the profits made from milking, and they drop dairy work. Prof. H. M. Cottrell discourses of the problem in this way:

The Kansas Experiment Station during the past winter fattened 130 head of calves for baby beef. These were divided into nine lots—one lot of ten had been raised by hand with skim milk, and another lot of ten had run with their dams in small pastures until weaning. Both lots were put in fattening yards at weaning and were fed for seven months on alfalfa hay and corn. The results are as follows:

	Average gain per head. Pounds.	Feed for 100 (pounds gain.)	
		Corn.	Alfalfa.
Calves raised with dam..	435	475	472
Skim-milk calves.....	440	439	436

Corn cost 40 cents a bushel and alfalfa hay \$8 a ton, making the cost of each 100 pounds gain \$5.28 for calves raised with their dams and \$4.88 for the skim-milk calves. The calves when fattened were shipped to Kansas City, the steers in each lot bringing \$5.40 per hundred and the heifers \$5.15. The packers paid the same price for the fattened skim-milk calves that they did for the others. In this trial the skim-milk calves made the greater gain, gains at the least cost, and made the most profit.

We attribute the good showing made by the skim-milk calves to the fact that at weaning time they were already on grain feed, they did not worry at loss of their dams as did the other calves, and they were perfectly tame.

The skim-milk calves were fed until weaning on sterilized skim milk with a grain ration composed of equal parts of corn and Kafir corn, with all the alfalfa hay they would eat. They were fed in this way for twenty-two weeks and made an average daily gain of 1½ pounds per calf. The feed to raise these calves to weaning cost \$5.27 per head. As the results show, they were in good condition for feeding when weaned, and the experiment shows strongly the good feeding qualities of the skim-milk calf and the profits that can be made from it, when the calf is properly handled from birth to weaning and then pushed for baby beef.

The College herd of scrub cows, bought without regard to their value for the dairy, produced in a year, at creamery prices, milk worth \$37.75 per cow. The skim-milk calves which were fattened in this experiment were of mixed breeding and were selected without regard to their value for the production of baby beef. They brought an average of \$40 each when marketed at about a year old. This shows a gross income in a year from a scrub cow and a scrub calf

of \$77.75, when both cow and calf are pushed, the cow's milk sold and the calf raised on skim milk.

The best cow in the scrub herd produced milk in a year worth, at creamy prices, \$60.88. The best calf in the skim-milk lot brought \$47. This shows that a good scrub cow with a good calf could be made to bring over \$100 gross income in a year. With large grade Shorthorn or Hereford cows of the dairy type crossed with a short-legged, thick-meated, blocky bull, the returns from both cow and calf would undoubtedly be much greater, making the combination of dairying and baby beef very profitable.

### The Shanghai, China, Telephone Exchange.

China, with very few railway and telegraph lines, has fewer telephone lines or exchanges. The Ericsson Telephone Co. recently installed one of the first telephone switchboards at Shanghai, China.



Shanghai, China, Telephone Exchange.

The illustration is of the first section, now in full operation. It is a full multiple board, made by L. M. Ericsson & Co., Stockholm, Sweden, designed for an ultimate capacity of 5000 subscribers. In the illustration it will be noted that, while the "chief" is a lady operator and was imported from Sweden with the switchboard, the others are all natives. It is said that they are remarkably apt in learning to operate, quick in their movements, and readily become expert operators. For service with the Chinese language the telephone is much superior to the telegraph.

With the latter every Chinese character has a number, and in using the telegraph it is necessary to first translate the message into numbers, then telegraph the numbers, and finally where received translate the numbers back into Chinese characters.

The operation of the Ericsson full multiple switchboard is claimed by the manufacturers to be extremely simple, each section being divided into five panels for convenience, and in large boards an annex is placed at each end. The plugs and cords are placed on two different planes, the answering below and the calling above—an advantage to the operator, as the answering jacks are just above the answering plugs, thus separating them entirely from the calling plugs and multiple jacks. In case of a call, the operator answers and can connect directly from her own division with any other subscriber in the board, thus giving very quick service and saving the time of the calling subscriber and of the other operators. Each operator has eighteen pairs of cords and plugs, which

provides for the busiest exchanges. As switchboards of this same pattern are already in operation in the United States, the Ericsson Co., 296 Broadway, New York, or their Pacific coast agents, the Electric Railway & Manufacturers' Supply Co., 68-72 First St., San Francisco, Cal., will take pleasure in giving further information to those who are interested.

In using forms for concrete work, a coating of soft soap prevents the concrete from sticking to the forms when they are removed.

## JERSEYS AT AUCTION!

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**MATILDA'S DUKE** 2d, 46406, by Matilda's Duke, tracing back to Stoke Pogis, the greatest bull the world has ever known.

### AMONG THE FEMALES IN THE HERD ARE:

**MATILDA'S OONAN**, 119388, by Matilda's Duke out of Sigletta, test 20 lbs. 12½ oz.  
**SILVIA'S ETHLEEL**, by Ethleel 2d's Jubilee, average record 35 lbs. 5½ oz.  
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## THE VETERINARIAN.

## Mammitis or Garget.

We have had very full discussions of milk fever during recent issues of the PACIFIC RURAL PRESS, and it will be well to proceed to another very serious udder trouble commonly known as garget. The veterinary writer of the London Farmer says this trouble has been very destructive this year in England, and he gives what seems to be a very thorough account of it.

**ANALOGY BETWEEN MILK FEVER AND GARGET.**—A great increase of that fatal malady known as milk fever is thought to be one of the consequences of high breeding among cows, and it can scarcely be doubted that mammitis or garget is largely due to the same process of selection. "Very likely," the reader will say. It may be so, but the risk is worth taking, as whether we keep cows to give three gallons or five makes all the difference between a loss or a small profit. It is an unanswered fact, and it may also be hoped that in time the defect will be bred out. In the meantime we must recognize facts, and allow a margin on our calculations if we would balance the ledger over an average of years.

**PARTICULAR CAUSES OF GARGET.**—The above is a predisposing cause in general. What are the particular causes, and how can we avoid them, is the practical side of the question. One of the causes in heifers and other animals at the first parturition is sometimes overlooked. It is an imperforate teat, like those supernumerary ones generally present at the back of the bag. The duct or passage is only partly formed, and the milk being unable to escape, remains in the milk channels and undergoes changes which give rise to garget. For this congenital defect we can do nothing of any real value. It is true we may make an artificial opening, and get milk from it, but we cannot create a sphincter muscle to keep it from running away. The chief thing in such cases is to recognize the cause by an exploration with the syphon, and having ascertained the condition, to at once dry off the animal and convert to other purposes.

There will, of course, be animals whose pedigree or other value may make it worth while to keep them for breeding, but defects of this kind are very likely to be hereditary, and, as a rule, it will be best to weed them from the herd or flock. We have heard dairymen assert that three-quarters from a good cow will often give as much as four, but they neglect to add from a poor cow. It is a fact that compensation is often found in an hypertrophied condition of one gland, when its fellow is lost, but where the glandular secretions have already been artificially forced it is not likely that this rule will obtain. Prof. Edgar, who has made a very special study of the subject, says that a first-class cow with one quarter lost will be worth, as a milk producer, about £4 10s per annum less than if she had the full complement. If his calculation is to be accepted, a lost quarter is justly regarded as a very serious objection. Although each quarter is separate and distinct from the rest, it is my experience that a cow affected in one quarter is more likely than others to have another quarter go wrong on subsequent calvings.

**SEVERAL VARIETIES OF MAMMITIS.**—It is because there are several varieties of mammitis that so much difference of opinion exists among cattlemen as to the importance of it and as to the treatment. The commonest form in cows and ewes, as well as sows, at the first parturition is nothing more than engorgement. The reader knows, of course, that milk, like all other secretion, must be derived from the blood; that at the time the young are brought forth there is a determination of blood to the udder, and that the glandular substance has the power of selection of the material we call milk, just as the salivary glands select

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or separate saliva, the liver secretes bile, the testes semen, and so on. The supply of blood may be overdone, or, what amounts to the same thing, the glands may not be able to manufacture their special products fast enough, and there follows congestion. There is more blood in the vessels and contiguous tissues than can be circulated freely; exudation follows from the vessels, the udder is hard and swollen, but very likely not particularly tender. These are the cases which bring so much credit to remedies whose merit consists chiefly in the hands of the person employing them. Any unctuous matter, as goose grease, or white oils, melted lard, green oils, etc., rubbed in with a degree of pressure from the fingers, and continued for some minutes two or three times a day, is helpful in dispersing the blood and giving capacity to the gland. The bunting and pushing of the calf and the lamb perform this useful function in the ordinary way, and often to the discomfort of the mother, as any one may see. It is when the gland is too painful, or the dam too irritable to bear this natural remedy that matters assume a more serious aspect, and we have to interfere. Many persons use warm fomentations with good effect, but I should like to say here that those who best succeed use also some lard or marshmallow ointment, or other grease as well. Warm water relieves congestion at the time, and gives room within by enabling the skin to stretch, but the integument shrinks again when it dries. Lard or vaseline permits of more stretching, and eases the pain for a longer time without the contraction which follows evaporation. Such cases of mere hyperæmia or congestion ought to be cured with proper nursing and care.

**ANOTHER CAUSE OF GARGET.**—Quite another matter is the garget due to the blocked-up milk channels from a previous parturition. Bad drying off is responsible for a large number of cases. There is a curdle which slowly contracts, and does not harm so long as the udder does not spring again with approaching parturition, but when this occurs and the gland substance is swelled to its utmost capacity, then the small, insoluble substance blocks the way, and milk is held back behind it, undergoes changes in its constitution, and becomes a center of infection involving the whole of that quarter.

Treatment for it is then required as for infectious mammitis. This form is not infrequent among cows. It is, however, most dreaded in the ewe flock, and rapidly spreads, presumably from lying on the soiled ground previously infected by others. Accidental mammitis we may call such cases as arise from the stings of insects and of adders. The latter may sometimes be found by careful examination after washing with soap and warm water. The sting of a bee or a wasp should be extracted with fine forceps or tweezers if found, and the seat of the injury bathed with a solution of carbonate of soda. The trouble is not, however, usually detected early enough, and restlessness in being milked and a diminishing supply is commonly the first thing noticed.

**POSSESS A TEAT SYPHON.**—Every stockman should possess a teat syphon, and, what is more, know how to use it. To those who do not we would say, do not use any unnecessary force, or you will permanently injure the teat and leave it leaky. If the orifice is found, and the syphon gently and slowly introduced, the sphincter muscle relaxes and permits its entrance. All the milk or watery fluid that can be got out should be withdrawn, and it may be worth while intruding a hay stalk up

the syphon and reinserting it two or three times before concluding there is no more to be got. Little granulated masses may stop the tube, and when cleared it will run again. After this the udder should be stripped by hand and manipulated to break up any curdles that are not too hard. The syphon ought to be made aseptic by carbolic oil, or any of the reliable disinfectants, before use, and carefully cleaned before putting away, or it will very likely be the means of introducing septic matter and making things worse.

**LOCAL TREATMENT.**—As an injection into the udder for any form of garget, save the simple congestions previously referred to, I have found the best results from chinosol in the proportion of about one-fourth ounce to one-half pint, sending up that amount daily at the temperature of the body. There is no doubt, too, that aperients are valuable in the treatment of this disease, and although discarded for a time by the advanced theorists on the Continent, the custom has been reverted to by the leading men at home and abroad. Aloes, proportioned to the species, age, and variety of animal, is given in bold doses—as much as two ounces or more for a Shorthorn cow, and a dram or so for a ewe. It is combined with Epsom or glauber salts, ginger, and niter. This treatment is attempted with a view to what is called "resolution," or the resolving of the inflammatory products and restoration to normal function and the saving of the gland. Despite these precautions, and in many of the infectious cases, there will be either abscess form, which will need fomentation and lancing when ripe for the discharge of matter, or else the quarter will slough. By the latter we mean local death and separation. After much pain and loss of condition, a dark line of demarcation begins to show between the living and dead tissue, the skin at the edges curls up, and the quarter, after a variable time, drops out as a dead mass, leaving an aching void which one might suppose would be long in filling up. It, however, heals up very quickly, when once the dead tissue is cast off. It should be dusted over with a dry antiseptic powder, and nature will do the rest. There is commonly so much loss of condition that many ewes are not worth saving, and cows are reduced so in flesh as to

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scarcely pay for keeping over. Importance, then, of taking active measures at first will be apparent, and a wise stockkeeper will separate the cow or ewe that shows symptoms of garget.

## Answers by Dr. Boomer.

## LAMENESS AND EYE TROUBLE.

**TO THE EDITOR:**—We have two cases of lameness among our young cattle. They are in good condition, but seem to get lame in the back all of a sudden and run sideways, and any excitement makes them worse. One of them has died. Will you kindly tell me what the disease is and how to cure it? We also have some of the same lot that are getting scums over their eyes. Please tell me what this is also.—READER, Pixley.

The symptoms in the two cases of lameness that you present are not sufficient to make a diagnosis or give you any idea as to the treatment.

The eye disease you mention is of an infectious nature. I would advise that you isolate the affected animals and place them in darkened stalls. The eyes should be well bathed in a solution of boracic acid. After wiping dry, a small amount of iodoform vaseline should be inserted between the lids by means of the finger. Then the eyelids should be rubbed gently in order to spread the ointment over the whole surface of the eyeball. It is important that the ointment should be prepared in the strength of one part iodoform to twelve parts of vaseline, and be careful that no particles of iodoform are left undissolved in the vaseline, as they will have an irritating effect on the eye. Several applications made as directed will be sufficient to perform a cure.

## FOR PROUD FLESH IN A WOUND.

**TO THE EDITOR:**—We have a horse that received an ugly cut on hind leg with barbed wire, and before it was discovered the proud flesh had grown considerably. We have been unable to check its growth; consequently the wound does not heal as it should. It is probable that when it does heal there will be a hard lump where the wound was, unless we can secure more intelligent and effective treatment.—SUBSCRIBER, Los Angeles county.

In the above case I would advise you to dust powdered bluestone (cupric sulphate) on the granulated surface daily, after thoroughly washing the wound; continue this treatment until the proud flesh is removed and the wound is even with the surface; then treat as a fresh wound. J. B. BOOMER, M. D. V.  
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## Bees and Locust Blossoms.

H. T. Chrisman writes to the Hanford Journal of his observations upon honey bees on locust blossoms, opposing the view of Mr. Motheral, who claims to have made the discovery that bees become intoxicated by sipping the honey from the blossoms of wild locust trees.

Mr. Chrisman says this subject—the cause of so many bees dying—was brought up in the bee keepers' meetings in that county for discussion several years ago, and the theory that locust blossoms caused the bees to become poisoned, or that it has any ill effects upon them, was exploded. It was proved that the bees gained rapidly in strength and honey production when feeding on the locust blossoms.

The real cause of dead and stupefied bees frequently seen under the black locust trees was discovered to be a bird, the oriole. The blossom being deep the bees crawl down into them to get the honey, and while they are there the oriole attacks them from the rear. The bird catches hold of the bee at the third segment of the abdomen and relieves the bee of its honey sack. The bird then drops the bee. Some fall to the ground dead, caused by the squeezing they have undergone; others live quite awhile, only to die afterwards. I have examined hundreds of bees which had been attacked by the oriole, as also have other bee men, with the result that the bees were all found to have been relieved of their honey sack at exactly the same place.

I had my bees near the Hanford park several years before the locust trees were cut down, and the bees flourished finely on the locust blossoms; in fact, I always figured on a fine lot of honey from my bees while they were there, and always got it.

## Mahogany in South America.

Consul General Guenther writes from Frankfort, Germany, June 12, 1901: German technical papers state that in Central and South America the revenues of many districts depend on the skill and activity of mahogany hunters. Mahogany trees do not grow in groups; much less are there whole forests of them. They are scattered, usually concealed in thickets. It requires skill and experience to find them. To fell a tree involves the work of two men for a whole day. On account of a thick thorny growth near the base of the tree a scaffold is erected around it, and above this, at a height of from 10 to 15 feet, the tree is cut, so that the best part is really lost. The felled tree is then freed of branches and hauled on a rough wagon by oxen to the nearest river, where rafts are made and floated down.

## Exposition in Japan.

The following is extracted from a letter to a resident of New York by Consul Lyon of Hiogo, dated June 5, 1901: "The proposed exposition in Japan will be held in Osaka from March 1 to July 31, 1903. The articles to be exhibited include agricultural, horticultural, forestry and water products, mining, industrial and mechanical exhibits, and those pertaining to education, science, sanitation, economy and the fine arts. The articles shall be those collected, produced or manufactured by the subjects of the empire, or by foreigners residing in Japan. The cost of the exposition is to be paid by the imperial treasury, except the expenses of exhibiting, which will be borne by the exhibitors."

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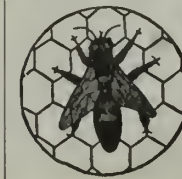
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### Floating Gardens in Russia.

In a practical paper in the August Century, on "America's Agricultural Regeneration of Russia," Alexander Hume Ford describes the floating gardens that are a feature of certain great Russian streams.

Along these great watercourses, which American dredgers are constantly deepening, are to be found the most extensive and productive farms of Russia. In a rich agricultural country intersected everywhere by canals, it is not surprising that a novel method of presenting object lessons to the tillers of the soil has been evolved. The Russian educators in casting about for the best means of economically fulfilling their mission decided to experiment with immense floating gardens hundreds of feet in length. These great barges, built wide enough to give comfortable area for the laying out of a garden, are launched with the breaking-up of the ice. As these floating agricultural experiment stations drift down stream to warmer climes, the seeds sprout, and grain grows and eventually ripens.

On the deck of the great barge is an extensive building, the residence of the professors of agriculture who have the station in charge, and a smaller house for the crew. The size of these buildings, however, is dwarfed by the immensity of the barge. On its great broad deck, besides the vegetable and grain beds, are various working models of beehives; for the government is bending every energy to revive this industry once famous in Russia, when honey mead was the national drink.

As the barge journeys with the current, it stops at every village. The church bell is rung, and the people gather from the fields to be led by the starosta or mayor, to the floating farm. They are invited aboard, where the various plants are explained to them, while illustrated lectures are sometimes given on the advantages of diversified farming. The questions of the peasants are intelligently answered, and seed is often left with the most enterprising for planting.

So far the large experimental farms have proved the most efficient method of spreading the new knowledge of farming in Russia, for the country

is one vast plain. The great rivers flowing southward through the rich agricultural prairies take their rise in the dense forests of central and northern Russia. Here the great barges are built late in the fall, the freshets are made to save the expense of launching and when fall comes again the wood of the barges can be sold in the treeless southern country, where wood is dear, and thus made to pay the expenses of the trip down-stream.

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

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- 679,103.—ORE WASHER—C. F. Allen, S. F.  
678,856.—WELL CASINGS—A. J. Bellah, Visalia, Cal.  
678,857.—FILTER—J. J. Betzold, Fresno, Cal.  
679,014.—PLOW—J. O. Boger, Redlands, Cal.  
679,108.—CAR VENTILATOR—B. F. Clarke, S. F.  
678,948.—EXTENSION TABLE—E. Estes, Los Angeles, Cal.  
678,949.—IRONING MACHINE—F. E. Fay, Los Angeles, Cal.  
679,224.—TRUNK FASTENER—E. H. Fox, Olympia, Wash.  
679,020.—LAWN MOWER—H. Garrett, Pendleton, Or.  
679,076.—EXPANSIBLE PULLEY—L. J. Johnston, Petaluma, Cal.  
679,086.—BICYCLE HANDLE BAR—L. L. Luce, Mt. Vernon, Wash.  
679,063.—DISPLAY STAND—W. S. McRay, Cosmopolis, Wash.  
679,088.—SNAP HOOK—D. Methven, Oakley, Cal.  
679,155.—CONCENTRATOR—J. J. Montgomery, Santa Clara, Cal.  
679,264.—PAPER TUBE—W. E. Pedley, Riverside, Cal.  
678,901.—CAN CUTTING MACHINE—F. W. Prael, Fairhaven, Wash.  
679,188.—HAME TUG—M. W. Ryland, Spokane, Wash.  
679,039.—SIGNATURE GATHERER—J. E. Smyth, Pasadena, Cal.  
679,040.—WASHING MACHINE—J. G. Sohn, Compton, Cal.  
679,095.—HAND LEVER—J. L. Twyman, Fairfield, Wash.  
679,248.—CONCENTRATOR BELT—F. W. Wood, S. F.  
679,135.—VEHICLE GEAR—J. E. York, Lowell, Wash.  
34,855.—DESIGN—J. J. Skinner, Paso Robles, Cal.

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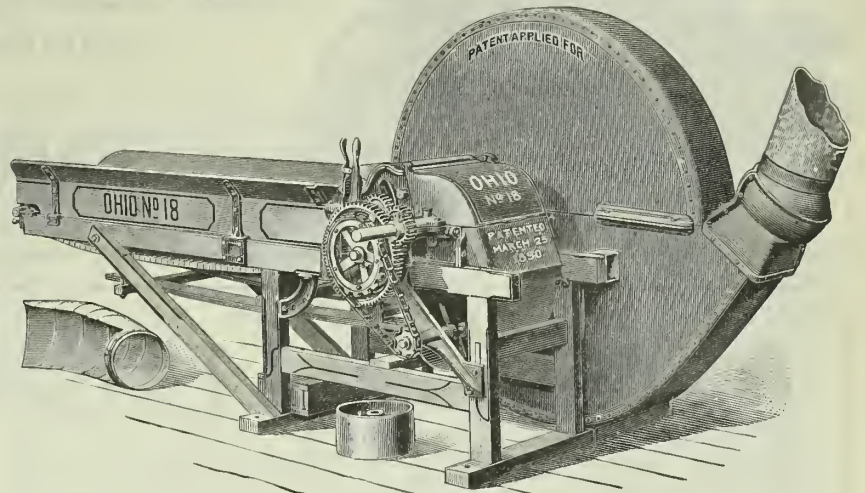
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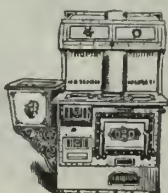
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 7.

SAN FRANCISCO, SATURDAY, AUGUST 17, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Picturesque Santa Barbara.

Santa Barbara has been known ever since the beginning of California things as a region of delight—a delectable realm where there is rest for the weary, recuperation for the worn and whence those beyond rest and recuperation find shortest journey to the gates of paradise. It has been of advantage to Santa Barbara to have thus been known for all these years. Her treasures of air and sea and scene—her charmingly varied landscape of coast-flat, grassy intervals, timbered mesas and rugged mountains, all rising from pearly sands and a deep blue sea—have brought to her population people of the most refined tastes and gentlest manners with means ample for home-making than which California knows no better. Santa Barbara, ever since the American occupation, has had a unique and distinctive character among California neighborhoods. Only once did the boomer approach with blare and blazonry and he retired discomfited. At all other times there has been steady growth, quiet investment and elegant improvement until it must now be conceded to Santa Barbara that she has achieved more development and adornment with less noise and tumult than any other prominent district of the State. It strikes us that such an achievement is very creditable. It indicates deep satisfaction on the part of those who have contributed to the development. It argues that there has not been rash projection, the cost of which those subsequently attracted should provide. It explains why progressive movements have yielded less disappointment than elsewhere and have occasioned minimum incidental hardship. Those who know Santa Barbara best are most profoundly contented, and those who come last never

awaken from the ecstasy which the initiation bestows.

There is now awakening a new life in Santa Barbara because of her position on the new southern overland railway line, but we do not expect any very marked modification of the established mood and manner. It is a type which is so clear and pronounced that it will only attract its own, but this will be enough to ere long adequately occupy the whole delightful areas between the mountains and the sea. Such development is now being sought in a way well calculated to attain it. There is in Santa Barbara a local Board of Trade which is inviting the attention of home seekers in quiet ways and has just published a tasteful pamphlet describing the charms and resources of the county. To aid them in their praiseworthy effort we shall reproduce some of their attractive data. One thing which is very characteristic of Santa Barbara is the way in which the possession of valuable mineral springs is suggested. There is no picture of spouting geysers, no sound of traffic in bottled waters, no procession of halt and blind making its way to healing draughts—there is simply the picturesque suggestion that nature's tonics and restoratives are available. And yet modest as is the intimation, the fact is that Santa Barbara has mineral springs of excellent worth and reputation, and they constitute an important item of local commerce. But that is the way Santa Barbara appeals to the public, by quietness and indirection.

Another picture gives a glimpse of the foothill region adjacent to the city of Santa Barbara, which is the favorite district for villa homes. Between the Santa Barbara valley and the Santa Ynez mountains, from 1 to 5 miles distant from the ocean, covering an area of from 1 to 3 miles in width and par-



Santa Barbara Rebeccas at the Well.

allel with the range the entire length of the valley from east to west, lies the Santa Barbara foothill region. Easy of access, in general consisting of slop-

ing benches and uplands, broken at intervals by sheltered canyons, with elevation varying from 500 to 1000 feet before the base of the mountain range is reached. Protected by the mountain range immediately behind it, with a southern exposure towards the Santa Barbara channel, which it overlooks for miles, this region secures the full benefit of the continuous sunshine and the refraction from the ocean upon its slopes, while the warm currents of air rise and, drifting through the hills, temper the constant light breezes from the ocean to greater mildness and dryness. This section, therefore, enjoys particular climatic features of its own which will eventually tend to make it pre-eminent as the chief resident section, among suburban localities in the neighborhood of the city of Santa Barbara, where the mildest of climate with the greatest possible dryness are prime factors of importance in the selection of permanent residences.

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E. J. WICKSON.....Horticultural Editor.

San Francisco, August 17, 1901.

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## The Week.

The strike continues the uppermost topic, and its ill effects are spreading in all directions. Even durable products like wool are being held back at producing points, because the transportation companies cannot guarantee delivery. Buyers want wool, but cannot get it, nor could they handle it if they had. Wheat is higher at the East, and on the basis of the world's supplies and requirements spot wheat should advance here and shipping be active as the limited tonnage available could make it; but spot prices are nearly knocked out, and even small tonnage cannot be used. Thus even the most perishable products are insulted and debased, while perishable stuff is simply perishing. The whole business is bad and paralyzing and should be impossible. As it is, there is no end in sight, and the prophets say it will be worse before it is better.

To show what intrinsic strength there is in the cereal situation, and that people are willing to risk money on the proposition that a way out will ere long be found, there is the firmness and advance in cereal futures. Grain gamblers concede the conditions favorable to an advance in grain values, although there is no spot selling, except a little to millers. Barley would be active if it could be handled. There is a ship waiting for barley for New York and a steamer for barley for Panama, but no telling when they will get away. Oats are quiet and steady. Corn is so scarce and high that consumption is being rapidly reduced. Small sales of rye for shipment are made but not moved. Beans are strong and some kinds advanced. Millstuffs are still scarce and high. Hay prices are unchanged. Deliveries are light and buyers have to move their own purchases if they are moved at all. Beef and mutton are steady; hogs are lower. More grain hogs are arriving, but prices are still above packers' views; a little drop would start them up. Butter is higher but not firm, except for the finest lots, which are scarce. Cheese maintains its value, with light stocks. Eggs are like butter—the fancy are few and have advanced. Fine fat and large fowls are selling well at low rates. Defective lots meet little demand, as there is plenty of Eastern stock of that grade. Potatoes are firm at last week's advance and much shipping is done. Onions are in good demand: offerings are increased and prices a little easier. Citrus fruits are unchanged, with a firm market for choice to fancy lemons. There have been rather too many over-ripe peaches but choice fruit of all kinds has been selling fairly. Dried fruits are quieter as free buyers are taking time to size up their purchases

and get their bearings. There is no decline, but less activity. Prunes are stationary, owing to the hold-up on the warehouse at San Jose. Almond bids are still to be opened and things are quiet. Walnut prices are not yet fixed. Hop picking is about to begin, but there is nothing important in the market as yet. Wool would be active if there were any here or chance to handle it.

The warehouse which the California Cured Fruit Association proposes to build at Santa Clara, as described in the PACIFIC RURAL PRESS of August 3, seems to encounter obstacles. A San Jose grower has brought suit to restrain the proceeding. He prays that the Association be required to render a full account of its doings and pay a dividend to its members out of the money in its hands. The plaintiff avers that the Association has not for the past year controlled more than 70% of the prunes, and will not the coming season handle more than 40%; that the orchards have failed to produce any quantity this season; that the growers are in dire need of money, and that the use of \$30,000 in building a warehouse at this time would be a misappropriation of trust funds; that the contract with packers compels storage in their warehouses; that it will be impossible to use the Association warehouse this year, and that the directors have no right to make provision beyond the life of existing contracts. This issue will be watched with much interest. It is not easy to see how much in it now comes from the growers and how much from packers who do not care for the growers who have their own facilities. Still there would naturally be opposition among growers who do not see just how the cost could be equitably assessed nor how distant growers would be benefited except through general advantages which might be realized. The whole proposition will be actively threshed in prune circles for the coming week.

Prof. Pierce, expert germ chaser of the Government at Santa Ana, proposes a campaign of increased activity against bacteriosis of the English walnut which is doing much injury in several parts of the State where the nut is grown, bringing corruption and blackness to the nut, foliage and new wood. Prof. Pierce is to be furnished with an assistant investigator and they will take up aggressive work: (1) Testing the efficiency of sprays in selected walnut orchards; (2) Study of orchards to locate resistant trees; (3) Propagating resistant roots to graft on. Prof. Pierce desires the co-operation of the growers. For a root that will resist the disease he hopes to obtain a hybrid by cross of wild black walnut stock with the English walnut. He says that Dr. Worm of Los Angeles has offered to allow experiments to be conducted in his orchard, south of Fullerton, which is a very suitable place for such work, owing to the large amount of the disease and to the uniform and medium size of the trees. At a recent meeting at Fullerton, Mr. Staley stated that the only thing the growers could do was to get some sort of trees which would resist the fungus; that it injured young grafted trees more than older ones. Still we hope the spraying experiments will disclose a preventive. It would be a monstrous affair to reconstitute all our English walnut acreage.

The California Smyrna, or the "Calimyrna," fig proposition seems to be going on in great shape. Mr. Roeding sends us from Fresno a fine specimen of this year's crop as grown by him. The crop is estimated at fifty tons of dried figs, although there may be nearer seventy-five tons. The blastophaga passed through the winter very successfully, in spite of cold and foggy weather, and the spring or profichi crop of Capri figs was simply enormous. Mr. Roeding distributed these figs three different times at intervals of about a week, and altogether 140,000 Capri figs were distributed in the 4200 Smyrna fig trees. The Smyrna fig culture now seems an assured success in California, and this is a fitting outcome of an enterprise so long and patiently pursued.

A tragic element enters into the question of whether tuberculosis can pass from cows to mankind in the fact that T. L. Monson, State Dairy Commissioner of Colorado, offers himself as a subject for a thorough test of the matter, provided a suitable annuity for his family is assured in case of fatal results.

Mr. Monson has made a study of the matter and is a strong believer in Dr. Koch's theory that the diseases are not identical, and is willing to stake his life on it. There are difficulties about the proposition, in that Mr. Monson can only prove the side which he does not desire to establish. His escape will hardly be accepted as a demonstration, because he may be constitutionally immune. It would not prove that some other man might not take the disease from the same inoculation. Nor does it appear how the funds would be secured for Mr. Monson's life insurance, nor how high he holds himself. We presume the settlement will have to be reached by the old routes, and that will take time, unless some paternal Government of Europe should give a lot of condemned criminals that chance for their lives.

The Australians are pushing us along the road to successful and permanent viticulture by recourse to vines resistant of the phylloxera. We have just received from the Department of Agriculture of Victoria a copy of a useful pamphlet on new methods of grafting and budding as applied to reconstitution with American vines. These are compiled and translated from the French and published by the viticultural station at Rutherglen, Victoria, whence we presume a few copies could be spared to Californians who applied for it. It recites many ways of both grafting and budding the grape, but we doubt if any of them will be found more practical and successful than those already known in this State. We allude to the matter as an indication that the Victorians do not propose to retire in the face of the phylloxera, nor should Californians do so either.

California will have a good representative at the meeting of the National Horticultural Commissioners at Denver in the person of Ed M. Ehrhorn of Santa Clara. The Board of Supervisors have granted him a leave of absence for sixty days for this purpose. Mr. Ehrhorn will make an exhaustive report on the fruit diseases and pests of his county and expound California methods of suppressing them.

Grape prices are proving all that has been expected of them. It is telegraphed from San Jose that the common price for wine grapes is \$25 per ton. This is what the wine corporation is paying, but independent wineries are offering \$5 a ton more. In some cases the growers on the west side of the valley have received \$30 and \$32.50 per ton. These prices give the independent buyers the pick of the choice lots.

The U. S. Department of Agriculture has just issued an interesting circular by M. A. Carlton, cerealist, showing the opportunity for profitable production of macaroni wheat in the semi-arid portion of this country for export to Europe, and he thinks 5,000,000 bushels could be profitably shipped next year. He mentions the central semi-arid regions of the country as well adapted to this product, and includes California. To this we have only to remark for California that the very dark, hard wheat which is suitable for macaroni loses its distinctive character very rapidly when grown in our large wheat districts of the interior and becomes starchy. Thoroughly distinctive wheat of the durum type becomes quickly mottled and works constantly towards the starchy whiteness of the wheat which is characteristic of the interior districts. This has been the experience with a number of wheats introduced by the State University for resistance to the Hessian fly. Of course, this tendency could be circumvented by continually introducing seed wheat for a hard wheat section; but it would be a question whether that would be profitable. The matter is quite interesting and not easy to determine in all its bearings.

As we go to press on Wednesday afternoon there appears to be a chance of the settlement of the strike by intervention of the Governor as a mediator. He secured several days ago a written statement of the strikers' demands and he will lay it before the Employers' Association and make an appeal for the settlement of the difficulty in the interest of the advance of trade and industry, the arrest of which is now causing such wide hardship. It is to be hoped that some ground of mutual consent may be secured, although no one can be said to clearly foresee it.



QUERIES AND REPLIES.

Walnut Bacteriosis.

To THE EDITOR:—I send you some English walnuts affected with black spots on the hull. Later in the season this affects also the interior of the nut. Is there any way of stopping it?—A. J. R., Alameda county.

This is the disease to which we refer in a paragraph on the preceding page. It is a very difficult disease to handle, and, as we have not had specimens from Alameda county before, it may be timely to indicate its character in case our readers in other localities may desire to look for it.

The disease is recognized by black sunken spots on the hull of the young walnut; generally worst at the blossom end and usually first seen there earlier in the season; but now the spots, as on the sample sent by our correspondent, have run together and encompass considerable areas of the surface. As the disease progresses the nut is transformed into a hateful black mass and is utterly destroyed.

This disease has been more or less prevalent for some years and has been carefully studied by Prof. Newton B. Pierce of Santa Ana. In the RURAL of June 25, 1898, a full account of his conclusions is given.

The disease is called bacteriosis because the cause is a minute parasitic germ of the bacteria group. It is capable of affecting all the tender and rapidly growing parts of the walnut tree—twig, leaf and nut—and by the fermentation which is induced these tissues are destroyed. Wherever the germ is carried in these tissues the disease breaks out and is therefore infectious. On this point Prof. Pierce says:

Infection may take place at almost any tender and rapidly growing portion of the nut, leaf or branch. Older tissues are not likely to be injured. That form of the infection of the nut which causes the greatest percentage of loss is what may be termed blossom infection. In this case the infected spot first becomes observable at the blossom end of the young nut, close to the base of the floral organs. At first a water-soaked spot is apparent, which latter shows a black central point surrounded by a watery margin. Often a minute drop of decomposed tissue filled with millions of the walnut germs breaks out at the center of the infection, and this, when dry, forms a minute scab-like flake resembling a scale insect. By cutting across the end of a young nut at this stage of the disease the water-soaked tissue within will indicate how far the ferments have acted upon the tissues. At a somewhat later stage it may be found that the organism has entered the jelly-like kernel of the nut and is rapidly digesting it.

Prof. Pierce demonstrated by actual tests that the germs may invade the healthy young nut without any previous injury to the outer skin. The germ suspended in water on the surface will enter the stomato or pores of the skin and start the disease. He has made hundreds of such applications and the disease has always come at the place where he has placed the germ. The secret of success in reducing the disease is a spray which will kill the germs early in the spring before the tender growth appears upon the tree. The germs pass the winter in diseased branches of the tree, often in the moist pith cavities lying below diseased spots. It also winters in fallen nuts beneath the tree, and probably upon fallen leaves and upon the soil. The warmth of spring brings about a renewed growth of those germs living through the winter. Many of these are apt to fall from diseased branches upon the newly opened leaves. Here the conditions are such as to favor rapid increase, and the new growth and nuts become more or less generally infected.

In the treatment of this disease, then, an effort should be made to remove as completely as possible the prime sources of this early infection. The fallen nuts and leaves should be plowed under deeply or gathered and destroyed. The tree should receive careful pruning to remove all diseased parts. Besides these two essential considerations, it may be thought well to spray young trees in the winter with the Bordeaux mixture for the purpose of disinfecting the tree as perfectly as possible. Twenty acres of spraying experiments conducted with this spray in the manner indicated by Prof. Pierce showed a saving of one-half, i. e., there was, on an average, twice as many diseased nuts fell from the unsprayed trees as from those thus sprayed.

Thus it appears that those who find such nuts on

their trees should realize that they have to deal with an infectious disease, and should resolutely determine to destroy all visible sources of infection and resort to Bordeaux mixture to destroy all stray germs which may be lying in wait for their opportunity to spread the disease.

How the foregoing will be affected by the fuller investigation which is now proposed cannot be foreseen. Obviously the treatment outlined is a great burden, nor has it always accomplished what is desired. To secure a walnut which will not blight is a desideratum, but this is a long-distant attainment, probably. It is possible that the fuller investigation may yield more speedily available recourses.

Squirrels Do Drink Water.

To THE EDITOR:—In answer to "H. P.," of S. F., in last week's PACIFIC RURAL PRESS, who wants to know if squirrels drink water, I say squirrels do drink water as gracefully as a Coney Island picnic girl. If "H. P." of S. F., or some experts, would like to see squirrels drinking, let them step off at Muir Station, Santa Fe R. R., or at Martinez, on the S. P., and take fifteen to twenty-five minutes' walk in Alhambra valley. I would show them how greedy squirrels are on a warm day for water, and they never get foundered. I know there are squirrels on some locations—like Mt. Diablo—half a mile or one mile to the nearest water. How they get water would be a puzzle to Darwin and Agassiz.—CHARLES BAUMGART, Martinez.

To THE EDITOR:—I see that "H. P." of San Francisco wants to know if squirrels drink water. He failed to state whether he meant ground or tree squirrels. If the former, I say they do drink water, and if the latter, I do not know anything about them. I have observed squirrels drink water when I lived in San Benito county. I was out hunting squirrels along the banks of the San Benito river, and when I came to a certain hole I saw about a dozen squirrels come out of the hole and scatter in every direction. I went and investigated, and saw that it was a well the squirrels had dug to get water. They had a regular run made inside the well so that they could get to the water. The well was only about 3 or 4 feet deep, but there was water in it.—L. HOLTZ, Lodi.

These responses show the value of the referendum policy of the PACIFIC RURAL PRESS. We have sense to know that twenty thousand eyes are better than one pair, and we give our readers the advantage of that fact.

Horn Flies.

To THE EDITOR:—Will your veterinarian please recommend a spray or wash to drive away horn flies from milch cows? The flies congregate in great numbers on sides and belly of cows, sometimes making great sores on cow's udder. They also greatly lessen the flow of milk.—A. V. KELSEY, Santa Paula.

Almost any decent insecticide will kill horn flies if well shot at them, but plenty of others will come in their places. We know of no repellent with such lasting effects that one application would answer. Fish oil with a little carbolic acid stirred in has proved most lasting and has retained its effects several days. In the case of a wound, sweet oil with a little carbolic acid stirred in, would be better than fish oil. If this could be used and a cloth cover tied over the spot it might remain in place for some time. If only a few cows are kept, a tailor-made dress of grain sacks large enough to cover the favorite places of the flies and well tied on will give the cow and her owner much comfort.

The Chance in Herbs.

To THE EDITOR:—As a reader of your paper I would like to know if there is any market for the root called Gentiana or any other herbs that would pay to plant, and how best to get the information.—L. R. B., Pasadena.

It is difficult to give satisfactory answer. The herb market is well and regularly supplied by a few growers who have secured reputation, like the Shakers of the East. Such growers can readily supply more than the demand calls for, but they are too wise to do so. Any new grower must learn what to grow and how to grow it, and then how to induce the druggist to substitute an unknown herb for a brand which he has used all his life. We do not think there is much in such undertakings, unless the grower is young and is willing to build up a reputation for the benefit of his grandchildren. Of course the chief difficulty is that these herbs are only in limited demand unless some medicine manufacturer develops a sky-scraper and needs much of some particular kinds.

Clearing Out Weeds.

To THE EDITOR:—We have a grain field which is very foul, the principal weeds being kale, radish and elder bushes. Any information you can give us as to the best method of ridding ourselves of these pests will be greatly appreciated.—J. U. S., Suisun.

We should cut the elders at once, in the hope of killing the roots. Whether this succeeds or not, the stumps should be grubbed or pulled out with a chain at the opening of the rainy season and the field plowed. As soon as the weeds get a good growth plow again, and then just before seeding kill the weed growth with a flat-tooth cultivator. You cannot clean the field in one year; you will be doing very well if you clean it in two or three years. Of course, a cultivated crop, if one can be profitably put in, will help greatly in killing off the weeds, which should never be allowed to go to seed.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending August 12, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Extremely hot weather during the week has caused a rapid ripening of fruit, and there has been considerable difficulty in promptly handling it. It is reported that Tokay grapes in the hill vineyards around Vacaville have been seriously injured by heat. In most places grapes are yielding better crops than anticipated, and in many cases much larger than last season's. The damage by the late frosts in the vicinity of Sacramento was much less than estimated. Peaches on the uplands are of excellent flavor and the yield is heavier than expected. Wheat harvest is progressing, and is nearly completed in some sections. Sugar beet harvest has commenced in the large fields around Tehama. Hop picking begins to-day in Yuba county; the crop is in excellent condition. Oranges and olives are doing well. Shipments of fruit and grain have been seriously retarded by the labor troubles in San Francisco.

COAST AND BAY SECTIONS.

The weather has been favorable for all farm work, except that in some sections harvesting has been somewhat retarded by heavy fogs. The rain of the 5th along the coast was beneficial to beans, and did not injure other crops. Harvesting and threshing are progressing. Most of the wheat is plump, and the yield is heavy. Barley is also of good quality and a large crop. Harvest will continue for several weeks in some sections, but is nearly completed in others. Sugar beets, hops and corn are in good condition. Fruit picking and drying continue. In some places the yield of prunes is better than expected. Grapes are looking well and will probably yield a fair crop. In the vicinity of San Luis Obispo apples are falling badly, from some unknown cause, and the loss will be heavy. Citrus fruits are in good condition.

SAN JOAQUIN VALLEY.

Generally cloudy and somewhat cooler weather prevailed Monday and Tuesday, with light sprinkles of rain in some sections; the remainder of the week was clear and very warm. The rain was too light to cause any damage. The weather has been favorable for the ripening and harvesting of all crops. Grain harvest is nearly completed in all sections. Harvest of deciduous fruit is at its height. Peaches and pears are being shipped to canneries and dryers in large quantities. Shipments of green fruit continue to the Eastern markets, and melons to the Northwest. Almond harvest has begun and crop will be very light.

SOUTHERN CALIFORNIA.

Clear, warm weather, with cool nights, has prevailed during the week, and fogs have been frequent along the coast. No damage was done to crops by the rain of the 5th. There is a fair crop of barley in some sections, but it is mostly of inferior quality. The oat crop is light, but quality good. Corn is reported a failure. Sugar beets and beans are doing well, and will yield good crops. Walnuts are doing well where water is plentiful. There is an excellent crop of peaches in the vicinity of San Diego. Grape picking has commenced in some localities. The Los Angeles canneries are running on fruit from the San Joaquin valley. Citrus fruits are in good condition.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, August 14, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week...	Minimum Temperature for the Week...
Eureka.....	.00	.03	.00	.17	62	48
Red Bluff.....	.00	.05	.05	.03	108	66
Sacramento.....	.00	.02	.02	.02	104	54
San Francisco.....	T	T	T	.02	64	50
Fresno.....	.00	T	T	.03	108	64
Independence.....	.00	.21	.08	.04	98	70
San Luis Obispo.....	.00	.18	T	.02	80	54
Los Angeles.....	.00	.08	.00	.03	86	60
San Diego.....	.00	T	.00	.03	72	64
Yuma.....	.00	.08	.02	.04	108	78



## HORTICULTURE.

### Orchard Cultivation.

By O. W. PRESCOTT, at the University Farmers' Institute at Covina.

When asked by Prof. Cook to write on this theme I told him that I had some cranky notions in my head about cultivation. In reply he said "very well, that is what we want." One of these notions is that there is no hard rule that will suit all kinds of soils, therefore I think it good policy in fruit farming for every man to study carefully his own soil and use that which proves to be the best. Covina is one of the many garden spots in southern California that depend entirely upon irrigation for moisture in the summer months, hence the great importance of the subject that is before us at this hour. Since starting to work up this paper I have visited many of my neighbors and have interviewed them on this line of thought.

It was my good pleasure to meet J. M. Smith, successor to C. T. Harris, a man recently from the East. When questioned regarding cultivation he said, "I have not had the experience in orchard work, but it seems to me it would be the better plan to cultivate fine and leave the dry dirt on top, exposing as little as possible of the moisture." The "El Dorado" ranch was next visited, owned by J. H. Adams. N. J. Nelson, the foreman was found. He stated that he ran 75 inches of water by the zigzag system alone, running same day and night for four or five days, and even longer, wetting down from 3½ to 4 feet, by this means saving the expense of three or four men, which means about \$15 per day of twenty-four hours saved over the old style of basins. By basins I mean the form that is made with the ordinary ridger, to be cultivated down after each irrigation. He cultivates with the old style "Potter" cultivator, goes both ways and floats down the top to a fine dust, and has cultivated about 4 inches deep by actual measurement.

J. H. Brubaker's idea of working the orchard is as follows: He runs the subsoiler north and south first and then furrows east and west for watering. At the lower end of his ten-acre ranch he double-blocks, or puts a block in between the trees. He puts the water in small streams and lets it run a long time, filling the blocks at the lower end. A point to be noticed is that the blocks in between the trees where the subsoiler had been run only took one-half hour for the water to settle out of sight, while the block around the tree took six or eight hours, both being filled equally. Mr. Brubaker uses the Killefer cultivator. He first cultivates the blocked ground both ways, 4 inches deep, then takes the furrows lengthwise 6 inches deep, going over the blocked ground the second time, then crosses everything, dragging behind his cultivator all the time a plank driven full of spikes which leaves a smooth surface. In justice to Mr. Brubaker I would say that this is his second season in California, but he has been a resident of Longmont, Colo., for several years and an old irrigator and raiser of truck, consequently he is a man of experience, and one I think that we can do well to pattern after. His idea is to stir the ground deep and fine and expose as little as possible of the moisture.

The day after Farmers' Institute I visited the orchard of Mr. Brubaker and found that he had run the water on the 17th of June and the moisture was within 3 inches of the surface among the trees that were at least eight years old and growing finely.

H. M. Houser uses a four-horse ridger, making a very large ridge. He fills the blocks full, wetting the ground deep. He uses the old style cultivator, cultivating both ways and diagonally, about 6 inches deep. He don't care anything about leaving the surface fine.

S. P. Jennison uses the zigzag system in connection with the subsoiler. He cultivates very fine, about 5 inches deep, leaving moist dirt below as much as possible.

A. M. Seeley has small trees at present and irrigates in furrows. He cultivates deep, not being particular about it being left fine. He thinks the subsoiler just the thing for heavy land.

S. S. Scofield uses the subsoiler, running it one way between the rows of trees. He runs the water under ground nearly all the time, running it a long time. He leaves the top of the ground dry all the time except one small furrow and drains, consequently there are no weeds to hoe. When water is run a man and team can cultivate down fine in two or three hours what it usually takes two or three days in the ordinary way. He has pipe lines so arranged that he can and does run water one way at one irrigating and the next time run the water crossing the first running of the water at right angles, using the subsoiler in both cases. He states to me that he runs 75 inches alone without losing any water.

A. P. Kerckhoff has a little different proposition than most of the ranchers around here. His soil is quite heavy and he uses the zigzag system entirely. He has done away with blocking, considering that a back number. One thing he especially urges is the running of a small stream and running it continuously without any breaks, not even to stop at night. He claims that the pores of the soil close up over night

and will not take up the water the next morning. He cultivates fine both ways.

J. O. Houser plows very deep in the early spring, as deep as a heavy team can draw a 10-inch plow. He runs water some in straight furrows but mostly in the zigzag furrow, running a long time. He cultivates about 3 inches deep both ways as soon as it will do. If it is very drying weather he cultivates the second time in five or six days, if cool weather in about ten days, 6 inches deep, going both ways and diagonally. He leaves ground just as cultivator leaves it. He uses old style cultivator, cultivating rather coarse. In running the second time he turns up the front shovels and lets the hind shovels go as deep as they can. He says that the ground will not form a crust when treated in that way.

As for myself I use furrows and block up five or six trees at the lower end of the ten-acre ranch. I like to give it all the time I can, but sometimes I am short of water, as we have been during the past four or five years, then I apportion the water so as to give all a little. I use a fine cultivator of my own make that cultivates the ground very fine, cultivating both ways and diagonally, being 3½ to 4 inches deep.

### A Native Fruit: Jajoba.

TO THE EDITOR:—Herewith I send nuts and twigs of a small bush that grows in our mountains and below the Mexican line even more plentifully, which may interest you. I do not know its botanical name and am unable to spell its Spanish one. It is a hardy, handsome shrub and makes almost no litter. The fertile and infertile blooms are borne on separate trees. It is very prolific and bears great quantities of nuts that fall to the ground as they ripen. The Spanish folks parch and beat up the nuts and make a decoction or drink, of which they seem very fond. The nuts sprout readily and the plants are readily grown.—H. H. GIRD, Bonsall, San Diego county.

We gave Mr. Gird's letter and specimens to Mr. J. Burt Davy of the University department of botany, and he recognizes the plant as "jajoba" of the Mexicans—Simonsia Californica. In Lower California the fresh seeds are eaten like almonds, and when dried by fire and ground they are, as Mr. Gird says, used as a beverage, either in the form of tablets made up with sugar or as a simple infusion. An analysis of the fire-dried seeds, made by the French Government a few years ago, shows them to contain 48.3% of fatty matter. The oil solidifies at 5°, is suitable for food, and is of good quality, being said to possess the immense advantage of not turning rancid. In Lower California it is prepared by ebullition with water. The French Government has recommended this shrub for experimental culture in the desert regions of the French colonies of North Africa.

### Who Can Tell Why?

TO THE EDITOR:—I am the happy owner of a six-acre apple orchard of Bellefleur ten years old. The trees are large and healthy and should average eight or ten boxes of fruit to the tree, but half a box is all they produce so far. The present crop is as small as ever, and I will be very grateful if you or your readers can tell me what can be done to insure a heavier crop in the future.

The trees are well cultivated, make a very satisfactory growth every year, are simply covered with blossoms in the spring and keep producing them for quite a while; even now an occasional blossom can be found. It is noticeable that the limbs having a northern or northwestern exposure bear the most fruit, and that there is very little fruit on the inside of the trees.

I have an apiary of ten colonies about 200 yards from the orchard and a number of apple trees of different varieties about 250 yards to windward. If insufficient cross-fertilization is the cause of the trouble, what variety of apple would it be best to graft on the old trees?

Aptos.

F. L. WILLEKES MACDONALD.

## FRUIT PRESERVATION.

### Problems of the European Raisin Grower.

Special Consular Report received by the Pacific Commercial Museum of San Francisco.

Consul B. H. Ridgely of Malaga, Spain, reports to the State Department a translation of a report of a committee appointed by the raisin growers of the Province of Malaga, which may be of particular interest to the raisin growers of the United States at this time, inasmuch as it seriously advises the abolition of the famous sun-dried raisins of Malaga and the introduction in their stead of the lye-cured raisins according to the process in vogue in Denia. The report would seem to indicate that the raisin growers of Malaga are much dissatisfied with the present situation, both as to the manner and cost of drying or curing their raisins, as well as the prices received for them.

CONFERENCE.—A meeting, attended by a large number of growers of raisins, was held on June 3 at the house of Mr. Iover, in Campanillas, for the purpose of exchanging ideas and opinions regarding the

growing crop, a matter which causes anxiety to each and every one of the growers of this Province, and above all to those who, because their crops are late, have to face a lack of demand for half their crop, which entails the ruinous prices they have been getting the last five years.

THE SITUATION.—The causes of this absence of demand were fully discussed, as well as the little or no returns obtained for the capital invested and the labor done, and although each man thought that different causes produced the aforesaid effects, all were agreed as regards the following facts: First—The supply to-day is greater than the demand, or, in other words, there are too many boxes of raisins and too few markets. Second—Raisins find a good or at least moderately good market up to the end of October; after that they must be sold at cost or less.

INVESTIGATION.—To see whether this loss—which falls on one of the best products of this Province—can be avoided more or less, a committee was appointed to study the matter by looking up prices and dates, besides all other data bearing on the subject, and to report on the means to be adopted to improve or to save from prompt destruction this beautiful and rich product of the soil. At another meeting, held June 15, an extensive report was read by the committee, from which we copy as follows:

THE REPORT.—No doubt the supply exceeds the demand, and there are only two ways of preventing this—either to diminish the supply or find new market, things neither easily nor quickly done, and which, therefore, could not save us from the destruction which threatens us.

With respect to reducing the cost of packing—although this would help to reduce the loss—it is not a radical remedy, because the demand is less than the supply. On the other hand, and to prove that this is not a saving measure, one has only to study any crop to convince himself that the enormous cost of packing comes from the way and time in which we are obliged to gather our crop. Now let us take, for example, a packing house where the fruit is excellent, "material" is ample, and "personnel" is adequate, and leave out of the question any damage by rains, insects, etc. September, October and November must be divided into three periods, viz., 1st of August to September 20th, when a box costs 16 reals to pack, because of the long days, sun and no furnace heat being needed. In this season raisins sell for about 50 reals per box on account of the great demand.

In the second period—September 20th to October 20th—the days are shorter, some furnace heat is needed, a box costs 30 reals to pack and sells for about 40 reals.

In the third period raisins are given away most years, and, what is worse, some of the profit of the two previous periods goes with them.

In this last period the bunches of fruit are continually moved from the wet edges of the awnings to the dry center, and after a number of days which never end they are put into the furnace, where they are picked over by the collectors again and again.

Finally, after so much work, the bunch is a mere skeleton and goes into a box, which does not always bring the modest price of 20 reals, which price is less than cost by 4 to 6 reals, and, therefore, reduces the profit made in the two former periods.

The logical inference from this is that the third period must disappear by doing something with it which will stop the giving away of raisins and money with them besides, and will prevent the Malaga market from being overstocked, thus causing a further drop in price on what is left over from the other two periods.

LYE-DIPPED RAISINS SELL BEST.—What each grower shall do is for him to say, but we who have been asked to study up the matter must give our conclusions, and they are that lye-cured raisins should be made. The consumption of lye raisins in London was nearly 1,000,000 boxes, against 70,000 from Malaga, or say 8%, and a slight difference in cost of the former would be enough to cover our raisins if they were cured in the same way. But what is most astonishing is that both kinds sell for about the same price, but if the cost of curing and packing each is considered the lye-cured goods bring much more money. Sun-drieds cost 20 reals, as has been shown, while lye-cureds cost only 6 reals, stuffing expenses also being less. From all we have said it is clear that we ought to know how to make lye-cured raisins. For the purpose we advise growers to combine and bring down a man from Valencia for each 10,000 to 15,000 boxes. This is done in Alhaurin. The expense is small and may be repaid either as a matter of business or of forethought.

NOTE.—A real is supposed to be the same as about 5 American cents, but so great is the rate of exchange against Spain at present that its value is only 3½ cents.

### THE SMYRNA RAISIN CROP.

From Smyrna Consul Rufus W. Lane reports to the State Department that the prospects of the local raisin crop indicate a good average. The crop of last year was exceptionally small.

The crop this year is estimated to be about: Sultan, 33,000 tons, against 19,800 tons last year; red raisins, 8800 tons, against 8100 tons last year; black



raisins, 18,800 tons, against 12,600 tons last year. The present stock of last season's fruit is: Sultanas 18 tons, red raisins 1000 tons, black raisins 2500 tons, the ton being equal to 2240 pounds. The first sales of the new crop are expected to take place about August 12th to 15th.

## AGRICULTURAL ENGINEER.

### District Road Divisions.

TO THE EDITOR:—Some time ago I noticed in the PACIFIC RURAL PRESS a bill which had been passed at the last Legislature regarding road districts, whereby they could be organized in townships. I have forgotten just what it provided for. Would you kindly publish it again or send me the number in which it was contained, or refer me to where I can find the law.—JAS. MILLAR, Dixon.

We have only published a brief statement of the law which now, by the courtesy of Hon. C. F. Curry, Secretary of State, we are able to present in full, thinking it will be interesting to many progressive neighborhoods in the State.

The Political Code is amended by adding a new article to chapter two of title six of part three thereof, to be numbered Article IX, embracing sections 2745 to 2772, both inclusive, so as to read as follows:

2745. Any portion of a county not contained in a permanent road division may be formed into a permanent road division under the provision of this Act, and when so formed shall have the powers herein enumerated and such as may hereafter be conferred thereon by law.

2746. A petition for the formation of a permanent road division (naming it) may be presented to the Board of Supervisors of the county wherein the division is proposed to be formed. It shall be signed by at least a majority of the land owners residing within the proposed division, and shall contain:

1. The boundaries of the proposed division.
2. The number of acres therein contained and the assessed valuation of the same according to the last completed assessment roll of the county.
3. The value of the improvements on real estate and of the personal property within the proposed division according to the last completed assessment roll.
4. The number of inhabitants therein as near as can be ascertained.
5. A particular description as to location of the road or roads which it is desired to construct or improve and the necessity for such work.
6. By the last completed assessment roll is meant the last roll as made up by the assessor, with the changes ordered by the supervisors sitting as a Board of Equalization.

2747. Such petition shall be accompanied by an affidavit stating that affiant has compared the valuations therein given with those on the last completed assessment roll and that the same are complete and correct.

2748. Such petition shall be presented at a regular meeting of the Board of Supervisors, and shall be published for at least three insertions in some weekly paper, or for the period of fifteen days in a daily paper published in said county, before the time at which the same is to be presented, together with a notice stating the time of the meeting at which the same will be presented, and naming a day when the Board will be asked to consider the same, such day not being later than the fifth day of the monthly session when said petition is to be presented.

2749. Upon the day named for the hearing of said petition the Board shall hear the same, and may adjourn such hearing from time to time, not more than two months in all. On the final hearing they shall make such changes in the proposed boundaries as they may find to be proper, and shall define and establish such boundaries. Any changes made by the Board shall not include any territory outside of the boundaries described in the petition, until the Board has given at least twenty days' notice of its intention to include such territory in said district. Such notice shall be given by publication for at least two insertions in a weekly or for a period of ten days in a daily paper published in the county, and by leaving a copy of said notice at each place of abode on said territory.

2750. The boundaries established by the Board shall be the boundaries of such permanent road division until the same shall be changed in the manner provided by law; but if it shall appear to the Board that the boundaries of any such division have been incorrectly described, it shall direct the county surveyor to ascertain and report a correct description of the boundaries in conformity with the orders of the Board. At the first regular meeting of the Board after the filing of the county surveyor's report, they shall cause notice to be published in some newspaper published in the county that the report will be considered at the next regular meeting of the Board, naming the day, and at such meeting the Board shall ratify the report of the surveyor, with such modifications as they deem necessary. And the

boundaries so established shall be the legal boundaries of such permanent road division.

### SPECIAL ROAD TAX.

2751. At the time of forming a permanent road division, or at any time thereafter, any ten or more resident freeholders thereof may petition the Board of Supervisors to have plans prepared for the construction or improvement of the road or roads or any part thereof mentioned in the petition for the formation of said division, or of the whole or any part of any other road in the division. Such petition shall state:

1. The recommendations of the petitioners as to the materials to be used and the manner of constructing or repairing said road or roads.
2. An estimate of the probable cost of such work.
3. A request that the Board appropriate for said work a sum of money (naming it) from the general road fund of the county.
4. A request that the Board appropriate for said work a sum of money (naming it) from the road district funds in the road districts of which said permanent road division forms a part.
5. A request that a special tax be levied or that the bonds of the division be issued to raise the balance necessary for said work.

2752. Upon receiving such petition the Board shall proceed to prepare, or cause to be prepared, plans and specifications for and an estimate of the cost of the work mentioned in said petition, and for any other road, bridge, culvert or work considered a necessary part of the permanent road petitioned for.

2753. When the Board has adopted plans and specifications for said work they may set apart therefor such a sum from the general road fund of the county as they shall consider equitable; also such sum from the funds of the district or districts of which said division is a part, as they consider equitable, but not less than seventy-five per cent of the sum which bears the same ratio to the whole fund of the district or districts which the assessed valuation of the division bears to the whole valuation of the district or districts of which it forms a part. The Board may in its discretion give more than this percentage. These sums shall be set apart in a fund, to be known as the permanent road fund of ——— division (using the name of the division).

2754. If a special tax has been petitioned for, the Board of Supervisors shall immediately order an election within said division to determine whether the same shall be levied. And the supervisors may, in their discretion, submit to the electors of said division the question whether the balance of the estimated cost of said improvement shall be raised by special tax in one, two or three successive years, raising an equal amount each year. Such election must be called by posting notices not more than one mile apart and not less than three in all, along the road or roads proposed to be constructed or improved, at least twenty days before the election, and also by publishing the same notice in a daily or weekly paper published in the county at least once a week for three insertions.

2755. Such notices must specify the time and place or places of holding the election, the amount of money proposed to be raised and the purpose for which it is to be used, including a brief description of the proposed work and materials to be used, and whether it is proposed to raise the amount in one, two or three successive years; if in more than one year, the amount proposed to be raised each year.

2756. For the purposes of this election, the supervisors shall establish, by order, one or more precincts and appoint three judges for each to conduct the same, and it must be held in all respects as nearly as practicable in conformity with the general election law; but no particular form of ballot need be used, nor shall any informality in conducting such election invalidate the same if the election shall have been otherwise fairly conducted.

2757. At such elections the ballots shall contain the words "Tax—Yes" or "Tax—No."

2758. The officers of the election must certify the result of the election to the Board of Supervisors, giving the whole number of votes cast, the number for and the number against the tax. If the majority shall be against the tax, the money theretofore transferred to the fund of such division shall revert to the funds from which it was taken.

2759. If the majority of the votes cast are for the tax, the supervisors must at the time of levying the county taxes levy a tax upon all the taxable property in the division sufficient to raise the amount voted for the current fiscal year. The rate of taxation shall be ascertained by deducting fifteen per cent for anticipated delinquencies from the aggregate assessed value of the property in the division as it appears on the assessment roll of the county and then dividing the sum voted by the remainder of such aggregate assessment value. The tax so levied shall be computed and collected in the same manner as State and county taxes, and when collected shall be paid into the county treasury for the use of the division in which the tax is voted.

### PERMANENT ROAD BONDS.

2760. If the petition mentioned in Section seven of this Act ask for the issuance of bonds, the supervisors shall call an election and submit to the electors of the division whether the bonds shall be issued and sold

for the purpose of paying for the proposed work or any part thereof.

2761. Such election shall be called by posting notices not more than a mile apart along the line of proposed work, and not less than three notices in all, for not less than twenty days before the election; and by publishing the same in a daily newspaper published in the county for a period of fifteen days, or in a weekly paper for three successive insertions before said election. At the time of calling the election, the supervisors shall indicate the polling place or places and define the boundaries of the election districts, but no regular election precinct shall be part in one and part in another election district.

2762. Such notice must contain:

1. The time and place or places of holding such election.
2. The name of three judges for each election district to conduct the same.
3. The hours during the day in which the polls will be open, not less than eight.
4. The amount and denomination of the bonds, the rate of interest, not exceeding seven per cent, and the number of years, not exceeding twenty, any part of said bonds shall run.
5. The purpose for which it is to be used, including a brief description of the proposed work and the materials to be used.
6. The signature of the chairman of the board, attested by the county clerk.

2763. Such election shall be conducted as near as practicable in accordance with the general election law, but no particular form of ballot need be used. No informality in conducting such election shall invalidate the same if the election shall have been otherwise fairly conducted. At such elections the ballots shall contain the words "Bond—Yes" or "Bond—No."

2764. The officers of the election must certify the result of the election to the Board of Supervisors, giving the whole number of votes cast and the number for and the number against the bonds. If two-thirds of those voting thereon are in favor of issuing such bonds, then the Board of Supervisors shall cause an entry of that fact to be made upon the minutes, and thereupon they shall be authorized and empowered to issue the bonds of said division to the number and amount provided for in such proceedings, payable out of the funds of such division, and that the money shall be raised by taxation upon the property in said district for the redemption of said bonds and the payment of interest thereon, but the total amount of bonds so issued shall not exceed fifteen per cent of the taxable property of the division as shown by the last equalized assessment roll of the county.

2765. The supervisors, by an order entered upon the minutes, shall prescribe the form of said bonds and of the interest coupons attached thereto, and shall fix the time when the several bonds shall become due, not exceeding twenty years from the date thereof.

2766. Such bonds shall bear no greater rate of interest than seven per cent per annum, and the interest shall be payable annually. The bonds and each coupon shall bear the autograph or facsimile printed signature of the chairman of the Board and of the county clerk. Said bonds shall be sold by the county treasurer, after reasonable notice, to the highest and best bidder, but not for less than par and accrued interest, if any.

2767. If at the election mentioned in Section sixteen of this Act an issue of bonds is not authorized, the money transferred to the fund of the division shall revert to the funds from which it was taken.

### MANNER OF PERFORMING THE WORK.

2768. The road work provided for in this Act shall be done by contract let to the lowest responsible bidder in accordance with the provisions of Section 2643 of the Political Code of California. The successful bidder shall give a bond in such sum as the supervisors shall provide, conditioned for the faithful performance of the contract, and for the payment of all labor employed and material used in said work, and such bondsmen shall be jointly and severally liable for the payment of all such labor employed and such material used.

2769. Before opening the bids for doing the work herein provided for, the supervisors shall appoint two inspectors, residents of the division, both of whom shall not belong to the same political party, and fix their compensation, not exceeding thirty cents an hour for the time actually spent in the performance of their duties, which compensation shall be paid out of the funds of the division. It shall be the duty of the inspectors to inspect from time to time the work being done under the contract. They shall file with the Board of Supervisors at least once a month written reports on the manner in which the contractor is performing the work, setting forth in detail any objections they or either of them may have to the manner in which the work is being done, with recommendations as to changes desirable and provided for in the plans and specifications. They shall also estimate the amount of work of an unsatisfactory nature done since their last report, and the supervisors shall make no payment on account of such alleged unsatisfactory work until the objections have been inquired into or until the contractor shall have



performed the work in strict compliance with the plans and specifications.

2770. The supervisors may from time to time, as the work progresses, make payments on account, but shall not, before the completion of the contract, pay more than seventy-five per cent of the contract price of the amount completed, and final payment shall not be made until the work has been accepted by the Board.

2771. Any money remaining to the credit of the division on the completion of the work contracted for shall remain in the fund of the division and be expended in the maintenance of the road thus improved. Upon the payment of the debts of the division, or upon the failure of the electors to vote a special tax or bonds in said division, for any part of the proposed work, the division shall cease to exist as a division.

2772. The expenses of organizing a permanent road division and of conducting any election under the provisions of this Act shall be a county charge, payable out of the general county fund.

Became a law under constitutional provision without Governor's approval, March 13, 1901.

## THE DAIRY.

### University Dairy School.

In our last issue we promised fuller description of the arrangements for the first session of the Dairy School of the University of California at Berkeley, which will open Wednesday, October 9, and close Thursday, December 12, 1901.

This course is designed to meet the needs of all persons who are engaged in the various lines of dairy manufacture and desire to make themselves more familiar with the principles underlying the manufacture of milk products and the application of those principles to actual practice, to the end that they may know how to turn out an improved product. The method of instruction and work done will appeal equally to the needs of all those who are manufacturing milk products, whether it be in the ranch dairy, using improved appliances, or in the large creamery or cheese factory. The advance in dairy practice has been so rapid, and the intimate relation of science to dairying has been shown to be so close, during the past few years that it is difficult for the person in ordinary practice to fully understand all that has been done and the benefits it may bring him in his work. The Dairy School, with its equipment of modern machinery and in the hands of trained instructors, is designed to offer an easy and quick means to come into close touch with what science is doing for the dairy industry and to learn the why as well as the how of scientific methods in dairying.

**ADMISSION OF STUDENTS.**—The dairy course is open to all persons of good moral character who are at least seventeen years of age and who have a common school education. No formal entrance examinations will be required, but it is expected that all applicants will have had sufficient school training to enable them to intelligently understand lectures, take notes, and perform the necessary textbook work. The usual grammar school course gives a fair preparation for this work, although the better the previous education of the student the greater will be the benefit to be derived from the instruction given. Owing to limited room the number of students is limited to thirty. Applications will be acted upon in the order received, except that a preference may be shown to those persons who have previous experience in dairy work and are sure to continue it after completing the course.

**EQUIPMENT.**—Four rooms on the ground floor of the Agricultural Building are being fitted up for the use of the Dairy School. The largest one, about 30 by 40 feet, is to be used as the work room for making butter and cheese. One is for the dairy laboratory, one for cold storage and cheese curing, and the fourth for a dressing room. These are being fitted with the best appliances for their special uses that can be secured, and they will make comfortable and convenient quarters for about thirty students.

**METHODS OF INSTRUCTION.**—Instruction in the dairy course will be given largely by means of practical work, supplemented by such lectures, recitations and demonstrations as are necessary to make plain the principles involved, and to give the student an insight into the various branches of science upon which true dairy development rests. The first two hours of each day—viz., from eight until ten o'clock—will be spent in the lecture room. The remaining portion of the day will be occupied in the work room and laboratory—the time required varying from three to six hours, depending upon the particular work at which the student is employed. The students' time will be so arranged that they will spend two days of each week in separating cream and butter making, two days in cheese making, and two days in the dairy laboratory.

**LECTURES AND RECITATIONS.**—"Grasses and Forage Plants," Professor Wickson. Sketches from a practical point of view of the conditions affecting the growth of grasses and forage plants in California, the species which have shown special adaptations

and value to the different regions, and suggestions concerning their culture.

"Milk and Its Products," Mr. Anderson. These lectures will take up a discussion of the secretion and composition of milk; the principles of the Babcock test and other milk tests; fermentations in milk and their control; principles and objects of pasteurization; various methods of separating cream from milk; cream ripening and use of starters; churning and working butter; cheese making and curing; scoring butter and cheese, and such other subjects as pertain more or less closely to the manufacturing of milk products.

"Dairy Bacteriology," Dr. Ward. The vast importance of this branch of science to dairying will receive much attention in a series of lectures and in textbook work covering the principles involved, and a study of the various kinds of bacteria that are found in milk. The student will have an opportunity to study different forms of bacterial life by means of the microscope and by observing their action when introduced into milk or cream. The use of bacteria in ripening cream and the effect of pasteurization upon bacterial action will be a matter of demonstration and experiment for each student to carry out for himself.

"Dairy Chemistry," Assistant Professor Jaffa. The aim of these lectures and demonstrations is to give the student an intelligent understanding of the nature of chemical action in its relation to the souring of milk, cream ripening, and the manufacture of butter, cheese, etc. The course is especially designed to meet the needs of those who have not had the opportunity of studying chemistry, but who should be familiar with the relation of this science to dairying.

"Feeding Farm Animals," Assistant Professor Jaffa. A course of lectures and recitations embracing the principles of nutrition; their relation to animal life for producing meat and milk; composition and digestibility of foods; concentrated foods and their value; how to compound rations; balanced vs. unbalanced rations; what kind of fodders to raise on the ranch and what to purchase, and how to feed economically.

"Breeds and Breeding," Mr. Anderson. The principles of breeding animals, with a discussion of heredity, variation, in-and-in breeding, etc.; the various breeds of dairy cattle as to their history, characteristics and adaptability to various conditions of land and food; general purpose cattle and their value to the dairy interests; how to select cattle for dairy purposes, and scoring and judging cattle by the scale of points.

"Veterinary Science," Dr. Ward. These lectures will include a brief discussion of the anatomy and physiology of domestic animals and the diseases to which they are subject. Especial attention will be given to the methods of prevention and control of tuberculosis, Texas fever, anthrax, hog cholera, and other important diseases of farm animals.

"Steam Engine," Mr. Major. A course of lectures, given in connection with practice in running engines, on the principles of the steam engine, its care and management; calculating speed of pulleys, and such other study of machinery as is essential in dairy practice.

**THE PRACTICAL WORK.**—Butter Making: This department is being fitted up with the most modern apparatus for making butter. Centrifugal separators of the latest style and representing at least three different types are to be in daily use. The new forms of pasteurizers and cream ripeners will be used to show their value in influencing the quality of the cream. The students will do the entire work of butter making, from receiving, weighing and sampling the milk to separating and ripening the cream, and churning, working and packing the butter. All of this will be under the direct charge of a skilled instructor.

**Cheese Making:** The work in this department will deal particularly with making cheese of the cheddar variety, and an effort will be made to show how it differs in value from the quickly made "California flat." Small vats will be used so that each student may do more of the actual work, and attend personally to the development from the time the milk enters the vat until the finished cheese is ready for market. The use of the rennet test in determining the ripeness of the milk will be continually shown, and the use of "starters" in cheese making demonstrated. This work, like that in butter making, will be in direct charge of a competent instructor.

**Dairy Laboratory:** The work here will consist of a thorough training in the use of the Babcock test in determining the percentage of fat in milk, cream, skim milk, whey, butter, cheese, etc. The use of the lactometer in connection with the Babcock test for detecting adulterations of milk will also be given careful attention. Problems will be given daily in the application of the various milk tests to actual creamery and factory practice. These problems will be of assistance to the dairyman in keeping dairy or factory accounts, and the supplement the work given in factory bookkeeping, making reports, declaring dividends, etc.

**EXPENSES.**—Tuition is free to students in the dairy course. As in all the other laboratories of the University, however, it is necessary to charge a fee of

\$10 to pay for cost of material used, and a deposit of \$5 to cover loss or breakage of glassware, part of which will be returned to the student at the close of the term. Further particulars can be had from Leroy Anderson, Instructor in Dairy Husbandry, Berkeley, California. It is hoped this new undertaking for which such loud call was made may command wide interest from the dairy public.

## THE STOCK YARD.

### Feeding Wheat.

The almost unprecedented drouth of the present season, which bids fair to cut the corn crop down to next to nothing, but which began late enough to allow the production of a large crop of wheat, is turning the attention of farmers to the possibility of feeding wheat in the place of corn. In previous years of similar conditions thousands of bushels of wheat were profitably fed. Secretary Coburn, in his report for the quarter ending September 30, 1894, included statements from a large number of farmers upon feeding wheat. These varied greatly in tenor, some regarding corn as better than wheat, others wheat as much better than corn. These views were necessarily based upon general impressions rather than exact comparisons. Experiments in feeding wheat to swine were performed at the Kansas Experiment Station and at the experiment stations of some other States. Experiments in feeding other stock have not been made at the Kansas Station, and but few at others, but hundreds of farmers have fed it to all kinds of farm animals. The following table, taken from Henry's "Feeds and Feeding," presents a compilation of the results obtained with swine at certain stations:

Feed for 100 lbs. gain.	Wheat meal.	Lbs.	411	438	481	522	465	463
Feed eaten.	Wheat meal.	Lbs.	2,257	1,273	1,144	1,206	6,054	.....
Number of days fed.	Wheat meal.	Lbs.	77	70	90	63	126	.....
Average weight at beginning.	Fed wheat meal.	Lbs.	163	137	103	247	247	.....
STATION.	Fed corn meal.	Lbs.	152	136	96	243	247	.....
Kansas.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota.....	.....	.....	.....	.....	.....	.....	.....	.....
Wisconsin.....	.....	.....	.....	.....	.....	.....	.....	.....
Wisconsin.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages.....	.....	.....	.....	.....	.....	.....	.....	.....

It will be seen that the results obtained were, on the average, practically identical. In other words, the wheat and corn fed in the form of meal are of equal value for feeding. The Kansas results are given in Bulletin No. 53, which contains some others in addition to the one included in the table. A limited number of copies of this bulletin are still available for distribution.

In feeding wheat satisfactorily, a number of considerations must be kept in view. The kernels being much smaller than those of corn, there is much more danger of their escaping mastication and passing out undigested. Many farmers who regarded it as unprofitable to feed wheat whole found on crushing or grinding it that all difficulty disappeared. It is especially necessary when fed to steers or milch cows. In animals with smaller mouths there is less waste than with cattle, and some have observed a positive advantage with sheep in feeding it whole. This was due, however, to the greater consumption of whole grain than ground. Ground wheat has an important disadvantage in feeding, in that it is apt to form a gummy mass, which adheres to the teeth, making it difficult and disagreeable to handle by the animal. This fault has been the source of some of the poor results in feeding it, and is best obviated by feeding it mixed with some other grain, as corn, oats or Kafir corn. Animals fed upon a mixture are also less liable to become cloyed than when fed on wheat alone.

In brief, the nutritive value of wheat, as shown by its composition, is greater than that of corn; it can be best utilized by feeding it ground or crushed, and mixed to a certain extent with oats, corn or Kafir corn. It may be fed advantageously to horses, cattle, hogs, sheep or poultry.



## Agricultural Review.

### BUTTE.

**WHY WHEAT FARMING DOES NOT PAY.**—Oroville Register: A well-known resident of this county, who owns thousands of acres, told us that he had investigated some of the wheat ranches during the present summer. On one of between 300 and 400 acres he found the family growing wheat, but there was not a cow, a hog, a chicken or a live animal of any kind on the place except work horses. The place was situated along a creek where there was pasture, where good water was abundant and where hogs, sheep and cattle would do well. He believes that one reason why wheat farming does not pay better even at the very low prices for grain is because so many farmers buy all their supplies instead of keeping hogs and poultry and having some kind of a garden.

### KINGS.

**DRIED PEACHES BRINGING GOOD PRICES.**—Hanford Journal: The price of peaches has gone up in a style that is a pleasure to the orchardists. From 4c it has gone up to near the 6c mark, and while the demand is not as active as it was a while ago, prices are holding in good shape and the highest prices may not yet have been reached, although it would appear to be the part of wisdom for growers to sell now, or as soon as a 6c rate is reached.

**THE RAISIN CROP.**—Hanford Journal: The cooler weather which has prevailed in the San Joaquin valley for the past few days was welcome to all, but doubly welcome to the fruit growers and packers. Not only was the fruit ripening too fast for the local canneries, who have been compelled to shout lustily for more help, but the raisins were also ripening too fast for the good of the crop. The continued hot spell made the grapes very susceptible to mildew. Cooler weather will have a tendency to check mildew and give the grapes a better chance to fill. Judging from present appearances, the first crop of Muscat raisins is going to be quite early this year in ripening, despite the frost, which set it back some.

**THE RAISIN MARKET.**—Lemoore Leader: The condition of the raisin market is very encouraging to the directors of the Growers' Association and to the packing companies. As all the raisins have been sold to the packers, it is now merely a question of putting them into consumption before the incoming crop, for if they were held they would hinder the sale of the coming crop. The directors of the Association expect to have a conference with a number of growers who desire a general meeting called to order to consider the matter of securing contracts.

### LOS ANGELES.

**RAPID GRAIN HANDLING.**—Pomona Progress: Two electric elevators, working simultaneously in opposite directions, have been installed in Charles B. Denison's warehouse. Mr. Denison has a quick method of handling the sacks, they being taken on the elevators a story above where they are to be stored and then sent down to their places on chutes. In this way two men have housed fifty-four tons of grain in a day.

### MERCED.

**GRAIN CROP LIGHTER THAN ESTIMATED.**—Merced Sun: The grain harvest in this county is nearly finished. The big farmers are still cutting. A great many are reporting less grain than they anticipated, due probably to the wet winter. South of town and in some places west of town crops have turned out better than was at first expected, so upon the whole the estimate of the yield at the beginning of the season will be but little above the actual harvest. Locally, grain has been exceptionally slow in coming into the warehouses, due partly to the existing lack of stock with which to haul, and due in part to a speculative feeling among the farmers which causes them to hold their grain piled in the field. The current month will see vast quantities of grain hauled.

### MONTEREY.

**HARVESTING PROCEEDS SLOWLY.**—San Lucas Herald: The harvesting of the grain crops in this vicinity proceeds slowly, owing to the fact that the machinery now at hand is inadequate to do anything like an expeditious job. Some of the owners of harvesters who at the beginning of the season confidently expected to wade through at least thirty acres per day now find that about half that acreage is all they can handle on an average. Help of the right sort is hard to procure, even at fancy wages, for men now look with indifference on an offer of \$3 per day who will next winter be glad to get \$1, or even a back door "hand out" of questionable antecedents.

### RIVERSIDE.

**THE LITTLE RED SPIDER.**—Riverside Enterprise: The little red spider that has caused trouble and expense by getting on the walnut trees here is liable to make trouble elsewhere, and may become as thorough a pest as the different scales on the citrus trees. The steam sprayer was put to work on the pest, and, after working thoroughly for several hours covering the line of trees on Lemon street and around the corner of Tenth street, Horticultural Commissioner R. P. Cundiff made a thorough examination of the work done and, in a search of an hour and a half, where the day before there were millions, he could find but three live specimens of the spider. The spray used was the distillate, and not the kerosene emulsion usually used in similar cases. It is recommended to dust such small plants as can easily be reached with finely powdered sulphur, as it is thought it will be equally as effective and more easily applied than the other.

### SACRAMENTO.

**BIG HOP CROP.**—SACRAMENTO, Aug. 10: This will be one of the most prosperous seasons the hop growers of this section of the State have had in a number of years. The crop is a heavy one and prices are ruling high, with a prospect of taking an upward movement. Harvesting in the fields south of the city will begin on the 20th inst. They have not yet decided what price the growers will pay this year to pickers, but it is believed that it will be 90 cents per 100 pounds. Last year they paid 85 cents. In the up-river fields, on the Yolo side, picking will begin on the 21st inst.

**FRUIT BOATS PULLED OFF.**—Record-Union, Aug. 12: All the river steamers that have been engaged in transporting fruit to this city from points along the river for shipment to the Eastern market have been pulled off this week and are now working on the potato crop. The Knight No. 2, which arrived yesterday, brought in 7000 sacks and will return for another load to-morrow. Such scattering lots of fruit as may be left along the river will be handled by the passenger steamers.

### SAN BERNARDINO.

**CHINO SUGAR CAMPAIGN.**—Chino Champion: The sugar campaign is progressing steadily and smoothly, although not yet up to capacity. This, however, is due to the failure to get beets in fast enough, and not to the inability of the factory to work them. The crop on the Chino fields is not ripening as fast as outside points, and only about 175 tons per day are ordered from Chino. So far only about 600 tons per have been sliced, but Mr. Ruopp has been in Los Angeles and Orange counties this week, organizing the harvest, and in a day or two it is hoped to get in 900 tons a day steadily. The sugar percentage is quite satisfactory, the Chino beets averaging about 16% sugar.

### SAN DIEGO.

**MONEY IN MELONS.**—National City Record: William Varney, from his garden between the Gregory property and the well-known High orchard, has taken enough melons to San Diego to supply a small village, and his lot of stuff is but a drop in the bucket. From away up in the Sweetwater, at Dehesa, the Gregg Bros. had up to last Sunday taken to the city and sold melons to the value of \$600, as they assert, and still the melons keep going in.

### SAN MATEO.

**HOPKINS' FARM SOLD.**—Redwood City Times-Gazette: Last week a deed was placed on record by the terms of which Emily B. Hopkins disposes of the Hopkins ranch, consisting of 605 acres and improvements to Wm. E. Hebbard of Brooklyn, N. Y., for \$200,000.

### SANTA CLARA.

**FOOTHILL ORCHARDS TURNING OUT BETTER THAN EXPECTED.**—Los Gatos Correspondence San Jose Mercury: Capt. B. P. Shuler of east Los Gatos reports that recently he examined the orchards along San Jose and Union avenues and could see but very few prunes on the trees. Skirting the hills, beginning at an elevation of several hundred feet above the town, the prune orchards have big crops. In the Santa Cruz mountains the yield will be much greater than was expected in the early part of the season. Frank H. Baker, whose orchard adjoins the Howell Reservoir, instead of having twenty tons or less as he thought in the early part of the season, now thinks he will have seventy-five tons.

**NEW PRICE FOR PRUNES.**—San Jose Mercury, Aug. 10: The board of directors of the California Cured Fruit Association has opened the doors of its warehouses—for a time at least—and will sell fruit. Yesterday the board fixed a price of 3½ cents basis and so announced to the commercial world. How long the price will

stand or how many prunes will be offered is not stated. Since the Association withdrew quotations orders have been pouring in, and yesterday it was said that orders for between 200 and 300 carloads had been turned down by the California Packers' Company. It is understood that the advance of ½ cent will not stop a large percentage of those orders and that they will be renewed at the new figure. The friction between the Association and the Packers' Company over the contract has grown much during recent weeks. It is currently reported that the relations between the two organizations are so strained that they are near the breaking point. In well informed circles the opinion prevails that the Association may be selling its own fruit direct to the trade before many days, unless some points of difference are settled.

**SANTA CLARA CHEESE FACTORY QUILTS BUSINESS.**—San Jose Herald: A final meeting will be held by the stockholders of the old Santa Clara cheese factory for the purpose of dissolution. The factory was in former years one of the best known cheese producers in the State and a paying concern.

### SANTA CRUZ.

**ACTIVE DEMAND FOR DRIED APRICOTS.**—Watsonville Pajaronian: There has been a lively demand for dried apricots during the past week and it is estimated that the sales to date are fully 150 tons, and about as much unsold. Prices have ranged from 8c. to 9c. per pound in sacks f. o. b. cars, and about 5c. for slabs. The prices have ranged about 25% higher than last year, and assure growers of apricots a nice profit on their fruit. At the prices paid the apricots have averaged from \$25 to \$30 per ton, green.

### SHASTA.

**PEARS INTENDED FOR CANNERS ARE GOING EAST.**—Anderson News: Some of our fruit growers commenced packing pears this week. Most of the pears were engaged by the San Francisco canneries; but, owing to the strike, they cannot be delivered and will be sent East.

### SONOMA.

**LARGE POTATOES.**—Healdsburg Tribune: Felix Seeman of Alexander valley exhibited here the other day three potatoes, which are as beautiful as any "spuds" can be. They are of the Snowflake variety, clean, white and smooth; just the kind to make an epicurian go into exclamations of delight, when baked and set before him. The largest "spud" weighed two pounds, the aggregate weight of the three potatoes being four pounds and six ounces. It is not alone their great size but their handsome form that makes them worthy of note.

**MAY HAUL HIS MELONS TO SAN FRANCISCO.**—Santa Rosa Press-Democrat: The present strike in San Francisco is preventing the shipment of much produce to the metropolis, as the railway companies will not receive carload shipments unless a guarantee is given that the car will be delivered without delay. Mr. Coffey, who has a large acreage of watermelons, proposes to haul his melons to San Francisco, irrespective of the strike. His plan is to take wagonloads of melons by road to Petaluma and there take wagons, horses and all aboard the steamer Gold and go that way to San Francisco, making the trip there and back in a day. It is feared, however, that many acres of melons will rot on account of the difficulty in shipping. It is estimated that there are 500 acres of watermelons in Sonoma county.

**BIG RANCH SOLD FOR A GOOD FIGURE.**—Healdsburg Enterprise: The Jones ranch of 3300 acres, situated 6 miles east of Healdsburg, has been sold to William H. Harris and Mrs. Jennie V. Harris of Santa Rosa. The price paid was \$16,000. The ranch brought \$13,300 and the stock which went with it sold for the remainder. The new owners will use the ranch for stock raising. They expect to put on it 200 cows and 1000 Angora goats.

### SUTTER.

**BIG YIELD OF PEACHES.**—Sutter County Farmer: The Giblin orchard has for years been famous for its prolific yield of fruit, and this season is no exception. From six acres of Tuscan clings the yield was ninety-five tons, or almost sixteen tons per acre. The fruit, being large, brought \$25 per ton at the cannery, which brings the Giblin Bros. close to \$400 per acre for the crop.

### TEHAMA.

**FIFTEEN THOUSAND TONS OF BEETS.**—A Tehama City telegram states that harvesting of the crop of sugar beets on the Fennell lands has begun and that a large number of men and teams will be employed for two or three months gathering, hauling and loading the beets on cars for shipment to the factory at Al-

varado. The crop is estimated at about 15,000 tons and it is intended to ship about ten cars daily.

### TULARE.

**TALL CORN.**—Dinuba Advocate: Jas. Lee, who farms about three miles north of here, brought to town a sample of his Indian corn lately. The stalk is certainly the tallest that has been seen in these parts for many years, measuring exactly seventeen feet.

**ACTIVE BUYING OF DRIED FRUITS.**—Dinuba Advocate: Talking about fruit buyers, R. F. Dunn is something of a rustler in that line. In thirty-six hours recently he bought over \$18,000 worth of peaches, paying 5 and 6 cents a pound for them.

**RAISIN MATTERS.**—Alta Advocate: Mr. Staniford, who is connected with the office of the Raisin Association in Fresno, was in this part of the country recently and received quite a surprise as to the attitude of our people regarding the Association. He found the growers a unit in standing with the Association; in other sections the people were somewhat indifferent, almost wholly on personal grounds. Mr. Staniford says this is the banner raisin district when considering loyalty to the Association. Our people have been very liberal with their endorsements when approached on the subject; yet without some one to press them to sign immediately, they postpone the matter, and soon they may find that procrastination has robbed them of the protection that the Association has afforded them the past few years.

### VENTURA.

**APRICOT CROP AND BARLEY YIELD.**—Oxnard Sun: Threshing of the 1901 barley crop is now in full blast in this valley and the crop is beginning to arrive at the warehouses. The yield is averaging far above the general estimate of a month ago, and Manager Holst of the Southern Pacific Milling Co. predicts that the output of the territory lying south of the Santa Clara river will easily reach 400,000 bags. The quality of the barley now coming in is exceptionally fine. There has been considerable guessing as to the apricot crop, and all estimates have been low. Since the drying season is practically closed and the orchardists are beginning to store their crop, they are agreeably surprised to find that the yield will be at least one-third more than the lowest estimates.

### YOLO.

**A BIG WOOL CLIP CHANGES HANDS.**—Red Bluff Sentinel: Barry Bros. of Cottonwood have made a sale of 350 bags of wool, aggregating 105,000 pounds. The wool comprises two spring clips—one of a year and the other of six months. The purchase was made by E. H. Tryon of San Francisco and the price was 14c. a pound. At this figure the wool brought \$15,000—quite a tidy sum from one band of sheep.

**ENORMOUS FRUIT LOSSES.**—A Woodland dispatch states that the markets of Woodland and other Sacramento valley cities and towns are overstocked with fruit and melons. This unsatisfactory condition is no doubt due to the fact that shippers are afraid to consign to San Francisco while the strike is on. The loss to farmers and fruit growers on account of the strike is likely to be enormous.

### WASHINGTON.

**HOP SHORTAGE.**—A Tacoma dispatch states that the hop crop of Washington will show a shortage over 1900 of 250,000 pounds. Yakima county will show a gain of 110,000 pounds, leaving a shortage on the west side of 360,000 pounds. This is the estimate of conservative hop buyers and is based on the condition of the crop at present. There has been an increased acreage of hops, so that the yield per acre will fall much shorter than it did during 1900. An unfavorable spring and poor weather conditions continuing into early summer are largely responsible for this fact. In addition, the presence of hop lice and flies has injured the crop. Only those who have sprayed faithfully will be able to save their crops.

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THE LAWRENCE-WILLIAMS CO., Cleveland O



## THE HOME CIRCLE.

### How Does It Seem to You?

It seems to me I'd like to go  
Where bells don't ring, nor whistles  
blow  
Nor clocks don't strike, nor gongs don't  
sound,  
And I'd have stillness all around—

Not real stillness, but just the trees'  
Low whisperings, or the hum of bees,  
Or brooks' faint babbling over stones  
In strangely, softly tangled tones.

Or maybe a cricket or katydid,  
Or the songs of birds in the hedges hid,  
Or just some sweet sounds as these  
To fill a tired heart with ease.

If 'tweren't for sight and sound and  
smell

I'd like a city pretty well;  
But when it comes to rest,  
I like the country lots the best.

Sometimes it seems to me I must  
Just quit the city's din and dust,  
And get out where the sky is blue—  
And, say—how does it seem to you?

—Eugene Field.

### Midnight.

From darkling steep, and misty vale,  
What wonder dawns upon the sight?  
The summer moon, a ball of fire  
That burns across the sultry night.

While flash and flicker from afar  
Fantastic fireflies in their play,  
On shining mead, and dew-wet marsh,  
The torchlight dancers swing and sway.

A red star hangs o'er woodlands dusk,  
Wandering breezes fade away,  
The trailing sweetness of the hour  
Spirit-like haunts the garden way.

Only the moon, and midnight deep,  
Touching the soul with hand of power;  
Dreams that arise, an incense rare,  
Mem'ries rich as the magic hour.

—Sheila.

### The Sphinx's Secret.

A COLONIAL STORY, FOUNDED ON FACT.

In times long gone by, in what were to be the closing days of His Britannic Majesty's colony of Connecticut, a deserted house stood some 2 miles down the river, on the east bank. A rambling structure it was, gambrel-roofed, with a two-story body, an ell, a lean-to and a woodshed, above whose ridge pole rose a gaunt well-sweep raking across the sky like the gaff of schooner. Standing on a jutting headland and commanding a wide view over the river below, the broad stretch of meadow beyond, the yet primeval forest still farther westward, and, at its rear, the rich valley, farm lands backed by wooded upland, and with age in every beam and every board, the Colonial mansion did not lack a semi-feudal air. Ancient it was, even in the year before Lexington, a little better than a forsaken ruin, decay settling upon its dingy doorstep and desolation beginning to breathe from its gaping windows. Its floors were grimed, its fireplaces empty, its lintels warped, and yet from something more—deeper than the lack of repair—the mind recoiled, something that clung invisibly to the forbidding walls, awakening horror and telling the imaginative mind that these walls could narrate their tales of mystery and crime.

Such was the reputation the house bore in that quiet country side at the time when it had been abandoned a year. No article of furniture remained, save in the "haunted chamber," where a high four-poster loomed, dismal and dusty. Within the heavy draperies that enshrouded this a young farmer had slept. In the morning he had told a tale of a ghastly dream in which he had stepped over a hidden grave, and yet another dream, jumbled and shifting, of a voyage in a small vessel and a subsequent short journey across burning sands in quest of a buried secret. The year had added its weight to Time's fingers, warping the thresholds and darkening the dusty passages, touching the mossgrown roof and the forsaken walls in turn with the time

of autumnal frosts, the weight of winter's snows, the blister of the sun of the dog days, and the mold of the rains of all seasons. Like a derelict of a few weeks starting upon years of drift that shall end in slow moldering the time-honored mansion stood when Pardon Brewer bargained for it.

Pardon was as much of a mystery as the house. A daredevil ne'er-do-well from early boyhood, last in lessons and first in every "forward" prank, disciplined by the goodly tithingman, chastised with unsparing hands by his Puritanical father, sternly rebuked by that vessel of wrath, Parson Williams, he early seemed to lose all title to his given name. One evening he had been sent supperless to bed. At dead of night he crept from his pallet to the window, swung at the risk of his neck to a bough, descended to Mother Earth and faced away down the river road, first burning with anger, then freezing with despair, and then allured by the bright hopes that ever return to youth and health. The fancy likes to range back through the centuries to that half-forgotten year and the wayward but ill-used farmer lad, sturdily trudging towards the great sea, beckoned on by boyish dreams of fortune and strange adventures in foreign waters. In passing years little had been heard of the runaway and that little at fifth or sixth hand. He had gone voyages over seas, he had shipped for the old country, he had 'listed in the Royal navy, he had gone a-pirating—so the stories ran; one laid down his shilling and picked up his choice, in the quaint phrase of the times. And then one bleak day late in October he came over the ferry and down the river road on as fine a sorrel mare as eye could wish to see, his saddlebag bulging out and navy pistols in his holster. With as little concern as a man buys an axe he bought the old mansion, laying a hundred English guineas on the ancient cherry highboy that served old Ashbel Brewer as sideboard, dresser and desk. Curiosity as to his story during the missing years devoured the little community, but somehow few cared to press questions when once before the prodigal. These few were curtly answered that he had followed the water, had found some little share of its fortune; that were all that concerned naught but him, he said in the language of that day. The shrewdest grayheads guessed, and as it fell out correctly, that but little remained of that fortune when he had passed to Gran'ther Ashbel Brewer the hundred gold guineas.

It was whispered that the wildness of Pardon's boyhood remained with him. His money was spent with a free hand. Jamaica rum was to him as sweet cider to the farmers of the valley. Among the women his failings were regarded with more leniency than among the sterner sex. The comely lasses, who in days ago had attended school with him, covered his sins with the mantle of charity, not a little to the discomfiture of the homekeeping swains that had borne the heat and burden of the day whilst the prodigal was in a far country. Sharp of tongue and quick of wit among his champions was buxom Asenath Burnham, who had thumbed the same speller with him scarce ten years before.

Young Brewer fell to repairing the crumbling structure. The guests were bidden to gather on All-Hallows' Eve, and with a fine sarcasm that made some smile and more shiver, it was in the haunted chamber that he placed the materials for the frolic. That gathering of a night packed away in the lavender and cedar of the eighteenth century survives in local tradition, and the account is tinged with the ideas and words of that dim time. Down the lane leading from the old river road, under a flying wrack, that at times veiled the moon as with a winding sheet, trooped the merrymakers, Brewers, Ensigns, Bidwells, Gooddales, Risleys, and Goodriches—Cynthys, Barbaras, Mehitables, Tryphenas, Dorothys, Prudences and Priscillas, and Joels, Elizurs, Daniels, Elijahs, Ozias and Isaiahs. In the frosty October moonlight they tramped past the gnarled and stripped limbs of an orchard into the wide hall, the maidens, our great-grandmothers, and

grandmothers, rosy and giggling, buxom and comely, some on the arms and some in—it pains me to write—in the arms of brawny Elizurs and Ozaises, but that was the fault of the moon and the frost. It were meet to omit allusion to their unseemly conduct, but what is done is done.

Scarce had they passed to the shadows of the hall, not dispelled by the hanging lantern, when their spirits began to sink. A few were bidden at once to the haunted chamber. As they merged in the gloom of that chill apartment, from which the mariner had by intention kept lantern or candle, their voices fell to whispers or they spoke no words. To them it was a chamber of horrors, its floors the covering of a hidden grave and the enshrouded bed a couch for the ghost of a murderer. Hardly one but shuddered as he glanced at the dark mass, and no one but marveled at the nerves of the man that slept there night after night, at his bedside a ghostly companion from beyond the shoreless sea. In varying degree, but still to all in a large degree, it was a chamber of mystery. The age was scarce a half century distant from Salem and witchcraft, and reason held less dominion than fear and superstition over most of the minds in the little gathering. The dense darkness of the draperies, the creaking boards, the bated breathing and tense silence kept the mind captive to fear was not less than horror. A rising wind complained in moaning minors through the crannies. Draughts stirred the curtains of the bed. A sickly and fitful tight struggled in through an open window whenever an interval in the flying scud permitted the pale moon to send its beams upon the house.

Presently the sailor opened the door and a shaft of light cut athwart the gloom. A lantern and candles were brought in. The preparations for the uncanny festival became visible in the spectral shadows and half lights. As the last sickly white candle was placed, the curtain of the bed swayed fantastically. A moment later it was pushed by a ghostly hand. A young woman near it screamed. A youth at her side blanched but sprang to clutch the fabric. As he moved he was struck full in the face by a small, half-visible object. Try as he would he could not restrain a cry of terror. The object glanced aside and hit his companion in the cheek. The woman, Asenath Burnham, screamed again. A second later another young woman exclaimed that she was struck. A panic was succeeded by a wild stampede for the dining-room, where, at least, there were light and heat, and no witches' hands to smite the living.

"I trow not whether this be parcel of your Hallowe'en mockery, Master Brewer," said Captain Risley, as he assisted Asenath to a settle, "but this I know, that more than mischief brews in that accursed chamber. Two, at least, of the women would fain quit and small thanks to your hospitality."

"Were not women here I would answer your taunt in a manner not to your liking," Brewer responded sharply. "But a truce to this, I shall find the answer to the riddle at once," and he re-entered the chamber. He soon returned, a small shapeless mass hanging limp in his hand.

"Here is the witch that scart ye, Captain, and methinks 'tis a brave man were scart by a bat," he said with a grim laugh, as he held the lifeless body on high. "I caught the creature and squeezed its brains out between thumb and forefinger. But now to the apple game."

He led the way back into the chamber of evil name, where "a little fleet of pippins" floated in a shallow half-hogshead filled with spring water. The company bobbed for the elusive apples with something of zest till Asenath, whose suspicions were aroused, recognized the great tub as that used by her father in scalding the bemired carcass of the family porker in the hog-butcher time. The dark discolorations on the staves had their meaning as blood stains. To her the night was becoming a night of either horrors or sickening qualms, and her charity for her home-coming school-mate was shortlived.

The candle game was next essayed. A well-nourished lass, with a candle in one hand behind her shoulder, and a hand glass in the other, walked backward from the chamber into the hall. A second woman did the same feat and prolonged the trip into the dining-room and kitchen. A third did as well, and, turning, reached the chamber again. Each was entitled to her secret wish. Asenath was next called. She repeated the exploit of the third and paused a moment at the door to say that she was minded to travel yet farther.

"Step into the cellar," began the mariner, with a laugh.

"The cellar!" the girl interrupted, with blanched cheeks. "To the hidden grave? Ay, that will I, though I die for it!"

"Nay, I did but jest," the sailor exclaimed, but the girl had already begun the brief journey. Even as he spoke she shifted the candle to lift the latch of the door of the cellarway. Ere he could stride through the press she was descending the crazy steps, but face foremost.

A moment later a shriek as from a woman in mortal terror rang from the black gulf below. Risley and the host each sprang to the door, but the former was the first to reach it. He rushed down the steps into the darkness and presently he and Brewer appeared, bearing the unconscious woman between them.

The company dispersed in confusion, some not tarrying even to see the victim restored to the world of consciousness, and several of the women departed without their wraps. When she had recovered Asenath would accept no word of apology or penitence from the host. Wan and trembling, but haughty, she left upon the arm of Risley. And presently the sailor remained alone in the chamber which seemed but too well to deserve its dark name, at his hand a glass and a faithful rum bottle, to which he had frequent recourse.

The ponderous brass knocker on the outside door sounded and a boy entered saying that he was sent for Asenath's tippet, which had been forgotten in the confusion. The article was found and stuffed in the youngster's greatcoat pocket.

"Now, lad, take yon lantern," said Brewer, pointing to the glimmering light in the hall, "and this candle."

The boy did wonderfully as he was bidden.

"Lead the way down the cellar steps!"

"Not there, Master Brewer," the boy gasped.

"Ay, there."

"Surely, you'll not take me down there, good Master Brewer," the lad begged in terror, beads of sweat gathering on his forehead.

Brewer drained a glass with a savage oath. He stepped to a closet and returned with a pistol in his hand.

"Lead the way, yonder, lad," he ordered, and there was something in his voice which made the boy obey.

In the morning the house was empty. As suddenly as had disappeared ten years before, Pardon Brewer had disappeared again. His mare was also missing. What caused his flight could only be conjectured. Some said that the Burnham maid could best explain; others that the prodigal's money had melted; others still that he had fled while impelled by a drunken fancy, and yet others that the old fit of wildness or passion for adventure or yearning for the salt savour of the sea overswept him. Gran'ther Brewer said that all were right, that his namesake's departure was due to a combination of all these reasons.

Two days after Brewer's departure the boy that entered the cellar recovered from his fright and told a strange story. At the muzzle of the pistol Brewer had compelled him to take a spade, he said, and dig in the sand underneath the beams above which the haunted bed rested. For nearly a half hour as it seemed to the lad, naught was found, but at length a large silver snuffbox was unearthed, on the lid



of which was laid in relief the head of the Sphinx above the initial "K." The sailor examined the article carefully and muttered something about a Captain Kidd. He then opened the box and drew out a paper which seemed to be a small map. There were other papers, but what they were the lad could not tell. They were also three or four gold coins and a few jewels.

It was said that Brewer was seen in New York a week later and that, with two similar characters, he shipped for Kingston, where the three chartered a brig, to which they gave the name Sphinx. Nothing was afterward heard of them or their vessel. The Sphinx's secret was never revealed—and never will be!—Hartford Times.

### The Hygiene of Fasting.

Almost all the great founders of religions have deemed it salutary to prescribe a certain amount of fasting for their disciples. The reason for this, says a writer in a German paper, is not only the knowledge that it is well for man to conquer his bodily desires, but also the experience that most persons eat too much. To overload the stomach with food is not less unhealthy than to deluge it with beverages; the more nutritious the food the more hazardous are the consequences when excess is habitual. Of all the sins of nutrition, the immoderate use of meat is certainly the most grievous. It gives to the body in a form that is favorable for easy assimilation the albumen that is absolutely necessary to life, and hence the earliest effect of its excessive use must be to surcharge the body with nutrients.

The chief point here is the critical examination of what is called hunger. Many persons believe that any and every sensation of hunger must be satisfied immediately, but this is a great mistake. An equally great, if not worse, mistake is the opinion that one must eat until a sense of satiety arises. These two mistakes combined lead to an unfavorable development of the human body, for the weight of the body grows to a degree that is detrimental to the activity of most of the chief and finer organs. For every stature an approximate weight may be stated that may be accepted as normal, and in accordance with this weight are adjusted the vital organs, particularly the heart. When a heart has volume sufficient only for a body of 150 pounds, and is put to work to satisfy the demands of a body of 200 pounds, it soon shows that it is unequal to its task. It is just as if an engine that was built to pull only a prescribed weight were used to pull a large additional weight. The activity of the other organs, as well as of the heart, is hindered by the fat that is deposited about the latter. Excessive nutrition injures the mental capabilities also. Of the particular consequences of excessive nutrition, such as hypochondria (the very name of which refers the reader to the region of the abdomen) and the gout, it is hardly necessary to speak.—Translation made for the Literary Digest.

"You know Weightman, the big, stout clerk at our store?"

"Yes; he must weigh over two hundred."

"Well, he saw an advertisement in the paper, 'Fat folks reduced, one dollar,' and answered it."

"Didn't he hear from them?"

"Oh, yes; it was just as advertised."

"That's good; how much has he been reduced?"

"Why, one dollar."—Philadelphia Bulletin.

A SOUTHERN DARKY, wishing the inhabitants of the village to know that he and his venerable partner had decided to retire from active life, astonished them one morning by placing the following sign above the door of the establishment:

"Dis am to infom de public dat me an' Ike am goin' out of bis'ness. Dem dat owes de firm may settle with me; dem dat de firm owes may settle with Ike."—Life.

### Origin of Turkeys.

C. E. Thorne, in his poultry book, says that naturalists at present recognize but two species of wild turkeys—the Meleagris gallopavo, which is the wild turkey of the southwestern United States and Mexico, and the Meleagris sylvestris of Canada and the northern United States. These varieties were formerly classed as different species under the name of Meleagris Mexicana and Meleagris Americana; but, as they differ but little, except in color of plumage, they have latterly been regarded as but one species. Meleagris ocellato is the rare and beautiful ocellated turkey of Central America.

In former geological epochs at least three other species of meleagris have existed within the limits of the present United States, the remains of the two species, Meleagris altus or superbus, and Meleagris celer, having been found in the Postpliocene of New Jersey, and of another, Meleagris antisus, in the Miocene beds of Colorado.

Anatomically the turkey is closely related to the Guinea fowl; hence, the generic name, meleagris, the ancient name of that fowl. The specific name, gallapavo, is compounded of the names of the barnyard fowl, gallus, and of the peacock, pavo.

Ornithologists now generally believe that the wild turkey of Mexico was the direct parent stock of the domesticated turkey, basing this belief on the facts that this variety shows more tendency toward the variation of the color of the plumage which characterizes the domestic fowl, as its wing coverts and tail feathers contain some white. Another argument in favor of this theory is that the species or variety existing in the vicinity of the comparatively civilized Mexicans would probably have been brought into domestication long before that whose habitat was among the roving Indians to the northward. That the turkey had been domesticated by the Mexicans is shown by the fact that it was introduced into Europe from Mexico or the West Indies by the Spaniards early in the sixteenth century.

### Packing a Trunk.

First lay out the wardrobe to be packed. Fold the skirts and petticoats to just fit within the trunk. Lay tissue paper between the folds and wads of it in the sleeves of waists. Put the underclothing and heavy things in the bottom of the trunk. Pack a layer, filling the corners well and lay a sheet of tissue paper or brown paper over the layer; then pack another and lay another sheet of paper. Pack rather tightly to prevent the contents of the trunk slipping back and forth. Where there are trays, tack tapes to their sides and tie securely down over the contents of the trays. It is a good idea to cut down the bonnet box to fit in the trays. Put a few stitches in the hat or bonnet to hold it securely to the box and either pack tissue paper or soft articles that will not crush the headgear around it. It is well to pack small things as handkerchiefs, veils, ribbons, etc., in small boxes, and these may be put in the tray. Always have a small box filled with sewing articles, as one is indispensable in traveling. For constant use in traveling, cheesecloth replaces tissue paper very well. The trays may be placed on a table or chair to avoid the leaning over that is so fatiguing.

YOUNG FATHER (in the future)—"Great snakes! Can't you do something to quiet that baby? Its eternal squalling just drives me wild!"

Young mother (calmly to servant)—"Marie, bring in my husband's mother's phonograph and put in the cylinder 'At Ten Months.' I want him to hear how his voice sounded when he was young."—New York Weekly.

"Yes; he's living in Kentucky now, and he says he's delighted."

"Huh! I can't imagine anybody being delighted over living in Kentucky."

"You don't understand. He means he's delighted that he's living."—Catholic Standard and Times.

### DOMESTIC ECONOMY.

#### Hints to Housekeepers.

Two figs soaked in water over night and eaten in the morning before breakfast will sometimes relieve constipation in children.

To brighten a carpet sprinkle over with salt just before sweeping, and after it has been swept, wipe over carefully with a cloth wrung out of salt water. This will remove all particles of dust and bring out the colors freshly.

Even worse than tepid tomatoes is cold toast, but nothing loses its heat faster. Better that the family should wait for it than that it should wait for the family. When toast is served at a meal, only enough slices for each cover should be sent to the table at one time, and the rest should be prepared as it is wanted. A plate with a cover is a convenience. The cover can be heated in hot water.

When several girls are traveling together it is a good plan to make one the paymaster for the route and the business manager for the trip. Before starting the common money may be placed in her hands. She will keep an exact account of all expenses, and at the last stopping place will settle up, returning any excess, or receiving her dues if she has been obliged to spend anything not anticipated before starting.

Fruit cookies of a delicious sort are made by creaming together one and one-half cupful of sugar with one cupful of butter. Beat three eggs separately, and add the yolks to the butter and sugar. Dissolve one-half teaspoonful of soda in two tablespoonfuls of milk or water, and add to the mixture. Add one and one-half cupful of seeded raisins and currants to two and two-thirds cupfuls of flour, and stir in alternately with the whites of the eggs. Drop from a tablespoon onto greased pans and bake.

Many people who like fresh, unsalted butter make it on occasions for themselves. The cream for the purpose should be about the temperature of new milk. A whipped cream churn or a big bowl and an egg beater are all the utensils needed. After the butter begins to appear, if it does not gather in a lump, the addition of ice water to the buttermilk will facilitate matters. When it has come together put the butter into a wooden bowl half full of ice water, and with a wooden paddle work out the buttermilk. Then form into pats and stand on ice.

Two surfaces of amber may be united by smearing them with boiled linseed oil, pressing them strongly together and heating them over a clear charcoal fire. To keep the parts in firm contact it may be well to tie them with the soft iron wire known as baling wire. Another method is a solution of hard copal in pure ether, of the consistency of castor oil, is suggested by Ph. Rust for cementing amber. The carefully cleaned surfaces of fracture, coated with the solution, should be pressed together and retained in contact by means of a string wound around the object, or in some other suitable way. The operation should be performed as rapidly as possible, since the evaporation of the ether impairs the adhesiveness of the cement; so that all arrangements for compressing the object should be made before laying on the cement. A few days are required for the complete hardening of it. In repairing mouthpieces, as for pipes, any of the solution happening to pass into the interior should be carefully removed at once with a slender feather.



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## S. F. Market Report.

### Produce Market.

SAN FRANCISCO, Aug. 14, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Dec.
Wednesday.....	69 3/4 @ 71 1/4	72 @ 73 1/4
Thursday.....	71 1/4 @ 70 3/4	74 @ 72 3/4
Friday.....	71 1/4 @ 70 3/4	73 1/4 @ 72 3/4
Saturday.....	71 1/4 @ 70 3/4	73 1/4 @ 72 3/4
Monday.....	73 @ 74 1/4	75 @ 76 1/4
Tuesday.....	73 1/4 @ 73 3/4	75 1/2 @ 76

### LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	5s 8 d	5s 9 1/2 d
Thursday.....	5s 8 1/2 d	5s 9 1/2 d
Friday.....	5s 7 3/4 d	5s 9 d
Saturday.....	5s 8 1/2 d	5s 9 1/2 d
Monday.....	5s 9 1/2 d	5s 10 1/2 d
Tuesday.....	5s 8 1/2 d	5s 10 1/2 d

### SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 02 @ 1 02 1/4	—
Friday.....	1 03 1/4 @ 1 02 1/4	—
Saturday.....	1 02 1/4 @ 1 02 1/4	—
Monday.....	1 03 1/4 @ 1 04	1 07 1/4 @ 1 07 1/2
Tuesday.....	1 03 1/4 @ 1 04	1 07 1/2 @ —
Wednesday.....	1 03 1/4 @ 1 03 1/2	—

### WHEAT.

The local market was necessarily stagnant most of the week, owing to the strike of teamsters and others engaged in the moving of grain from cars and steamers to wharves and warehouses and from warehouses and wharves to outgoing vessels. The railroad authorities gave notice that no more deliveries could be made during the strike. The only wheat which has gone out from this port during the current month is about 1500 tons taken by two steamers for Peru. That there will be little or no movement here until the strike is terminated is altogether probable. Had there been the usual facilities for moving merchandise, it is likely there would have been considerable activity experienced in the grain trade, as business in Eastern centers was decidedly active during a great part of the week, and prices ruled firmer, with foreign markets generally in healthy condition. Many of the growers in this State are from choice holding off the market for the time being, expecting higher values later on. If those who are compelled to hold off by existing conditions will fare better in consequence of their forced procrastination remains to be seen. It is deplorable, however, that transportation facilities are tied up as at present, as this should be a busy time.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.02@1.04.	
May, 1902, delivery, \$1.07½@1.07½.	
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.03½@1.03½; May, 1902, —.	
California Milling, old .....	\$1 02¼@1 05
Cal. No. 1 shipping, alongside.....	97¼@ 98¾
Oregon Valley.....	97¼@1 02¼
Washington Blue Stem.....	1 00 @1 05
Washington Club.....	97¼@1 00
Off qualities wheat.....	95 @ 97¼

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	65 1/4 @ 65 1/2	65 1/2 @ 65 1/4
Freight rates.....	37 1/4 @ 40 1/2	38 1/4 @ 40 1/2
Local market.....	\$1 05 @ 1 07 1/4	97 1/4 @ 1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### FLOUR.

Market is inactive, owing to the inability of receivers and shippers to handle flour with customary promptness. The export movement of flour previously contracted for, however, was of fair proportions. The China steamer departing Sunday carried 17,732 barrels for China and Japan. Values are without quotable change, but business doing at full current figures is mostly of small transfers.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

### BARLEY.

The market has ruled very quiet, and there have been no appreciable changes in quotable values since date of last report. Both outward and inward movement was checked by the labor strikes which have

been on at this port for a fortnight or more. When the industrial atmosphere is again clear, there will likely be an active movement in barley, as large quantities have already changed hands for shipment to Europe and the East. A ship and steamer were added to the engaged list the current week to load barley for New York. Business on local account was of small volume in barley of any sort. Some of the mills have been temporarily closed down, and this has greatly restricted the demand for feed descriptions. Call Board business was light and fluctuations of narrow range.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	77 1/2 @ 82 1/4

### OATS.

Quotable rates and the general tone of the market have remained much the same as preceding week. Not many oats were received, and very few Whites or Grays have thus far come forward, but increased arrivals of above named descriptions are expected at an early day. Spot supplies of colored kinds are of moderate volume, but it is the exception where they are being crowded to sale, some refusing to lot go at full current rates.

White Oats, fancy feed.....	1 17 1/4 @ 1 22 1/4
White, good to choice.....	1 10 @ 1 15
White, poor to fair.....	97 1/2 @ 1 05
Gray, common to choice.....	1 00 @ 1 10
Milling.....	1 20 @ 1 25
Surprise, good to choice.....	1 20 @ 1 25
Black Russian.....	85 @ 1 15
Red.....	90 @ 1 25

### CORN.

Market is so poorly stocked with both domestic and imported product that little more than nominal quotations are possible at this date. Two shipments, aggregating 100 tons, were made by steamer to Mexico. Prospects for supplies soon being materially increased are not encouraging.

Large White, good to choice.....	1 70 @ 1 75
Large Yellow.....	1 65 @ 1 70
Small Yellow.....	1 65 @ 1 70
Eastern, in bulk (carload lots).....	1 60 @ —

### RYE.

The immediate demand is light. In the matter of quotable rates there are no changes to note.

Good to choice, new.....	77 1/4 @ 80
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### BUCKWHEAT.

Practically nothing doing in this line. Owing to the existing dullness, values are necessarily largely nominal.

Good to choice.....	1 65 @ 1 75
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### BEANS.

Demand continues fairly active, being largely for white beans and Limas for Eastern shipment, but there is also inquiry for colored beans for shipment as well as on local account. Values are being well maintained throughout, and nothing to indicate that there will be other than a firm market for some time to come. Such changes as are made in quotations are without exception in favor of the selling interest.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 90 @ 5 00
Lady Washington.....	4 00 @ 4 25
Pinks.....	2 40 @ 2 50
Bayos, good to choice.....	2 75 @ 2 85
Reds.....	3 00 @ 3 25
Red Kidney.....	4 25 @ 4 50
Limas, good to choice.....	6 40 @ 6 50
Black-eye Beans.....	3 50 @ 3 75
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

### DRIED PEAS.

Not much movement at present, and seldom is at this time of year. For choice Green the market is moderately firm at prevailing rates. For Niles peas and common qualities of Green the market inclines against sellers.

Green Peas, California.....	2 25 @ 2 50
Niles Peas.....	1 50 @ 1 75

### WOOL.

While facilities for moving wool are poor, owing to the strike, the market remains firm, and there would probably be more activity if the wools were here for buyers to take hold of. Stocks now in this center are mostly in second hands, especially of free wools. The heavy purchasing recently effected in the interior has cut down stocks remaining in hands of growers to small volume. There is little or no doubt that there will be a practical clean-up in this market of all wools, both Spring and Fall, other than heavy and defective, long before the close of the season.

### SPRING.

Humboldt and Mendocino.....	14 @ 16
Humboldt and Mendocino Lambs.....	11 @ —
Northern, free.....	12 @ 13
Northern, defective.....	10 @ 11
Middle Counties, free.....	10 @ 11
Middle Counties, defective.....	9 @ 10
Southern, 12 mos.....	8 @ 9
Southern, free, 7 mos.....	7 @ 10
Southern, defective, 7 mos.....	7 @ 8

Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

### FALL.

Mountain, free.....	7 @ 9
San Joaquin and Plains.....	6 1/4 @ 8
San Joaquin Lambs.....	7 1/4 @ 9

### HOPS.

Nothing doing at the moment, with no spot stocks worth mentioning. Hop picking is expected to be under full headway in the earliest yards the coming week, and spot offerings of new will likely soon follow in wholesale quantity. The crop of the coast promises to be considerably lighter than last year and is expected to bring better average figures.

Good to choice 1901 crop.....	13 @ 15
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### HAY AND STRAW.

The hampered conditions lately experienced for receiving and delivering hay have given poor opportunity for testing values under normal circumstances. Arrivals were much lighter than they would have been if usual facilities had existed for moving freight from boats and cars. Only small deliveries were possible, however, and consignments were shaped accordingly. Business effected was in the main at generally unchanged rates, prices for Alfalfa hay being about the only noteworthy exception, this description being scarce and high.

Wheat, good to choice.....	7 50 @ 10 00
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 00 @ 8 50
Alfalfa.....	8 50 @ 10 50
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 3 bale.....	25 @ 42 1/2

### MILLSTUFFS.

Values for mill offal of all kinds are still on a high plane, owing to exceedingly limited supplies, many mills being closed down and turning out nothing for the time being. Current rates on Rolled Barley are being well maintained. Milled Corn is commanding stiff figures.

Bran, 3 ton.....	19 00 @ 20 00
Middlings.....	22 50 @ 23 50
Shorts, Oregon.....	19 00 @ 21 00
Barley, Rolled.....	17 00 @ 17 50
Cornmeal.....	33 00 @ —
Cracked Corn.....	34 00 @ —

### SEEDS.

The same inactivity as previously noted is prevailing in this department, as much due to lack of wholesale supplies as to absence of active inquiry. Quotable values are without special change, but are necessarily largely nominal for the time being.

Flax.....	Per ctt. 2 50 @ 3 00
Canary.....	Per lb. 3 1/4 @ 3 1/2
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

### BAGS AND BAGGING.

Some Grain Bags are going North at the reported price of 8c., and certainly no more is being paid in a wholesale way. Small orders on local account are being filled at a fractional advance on the above rate. In this State the season's demand for Grain Bags has been about satisfied. Wool Sacks are moving in a moderate way on account of Fall clip and at generally steady prices.

Calcutta Grain Bags, spot.....	8 @ 8 1/4
San Francisco Grain Bags, 2x3x, spot.....	8 @ 8 1/4
Wool Sacks, 4 lbs.....	35 @ 36
Wool Sacks, 3 1/2 lbs.....	32 @ 34
Fleece Twine.....	7 1/4 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/4 @ 7 1/4

### HIDES, PELTS AND TALLOW.

Market for Hides and Pelts is moderately firm, but prices show no quotable advance. Tallow is in very fair request, with sales in the main at full current figures.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/4 @ —	8 @ —
Medium Steers, 48 to 56 lbs.....	9 1/4 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/4 @ 9	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/4 @ 9	8 @ —
Wet Salted Kip.....	9 1/4 @ —	8 1/4 @ —
Wet Salted Veal.....	9 1/4 @ —	8 1/4 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	— @ —
Salted Horse Hides medium.....	2 00 @ —	— @ —
Salted Horse Hides, small.....	1 00 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 00 @ 1 25	— @ —
Dry Colts' Hides.....	50 @ —	— @ —
Pelts, long wool, 3 skin.....	75 @ 1 00	— @ —
Pelts, medium, 3 skin.....	50 @ 75	— @ —
Pelts, short wool, 3 skin.....	30 @ 40	— @ —
Pelts, shearling, 3 skin.....	10 @ 25	— @ —
Deer Skins, best summer.....	35 @ —	— @ —

Deer Skins, good medium.....	— @ 30
Deer Skins, thin winter.....	— @ 10
Elk Hides.....	10 @ 12
Tallow, good quality.....	4 1/4 @ 4 1/2
Tallow, No. 2.....	4 @ 4 1/4
Goat Skins, perfect.....	30 @ 37 1/4
Goat Skins, damaged.....	10 @ 20
Kid Skins.....	5 @ 10

### HONEY.

Market continues quiet, with apiarists, as a rule, unwilling to unload at prices generally named by wholesale operators. Quotations represent as nearly as possible the values ruling at this date for round lots, although free sales could not probably be effected at full figures, while, on the other hand, higher prices than quoted are being realized in the filling of some small orders.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/4 @ 5
Extracted, Amber.....	4 @ 4 1/4
White Comb, 1 lb frames.....	11 @ 12 1/4
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7 1/4

### BEE SWAX.

Spot stocks and offerings are of very limited volume. Market is unfavorable to buyers, quotable rates remaining nominally as before noted.

Good to choice, light, 3 lb.....	26 @ 28
Dark.....	24 @ 25

### LIVE STOCK AND MEATS.

Beef is not in heavy receipt, but is in sufficient supply for immediate requirements. Mutton market is quotably unchanged, with demand and offerings both of very moderate proportions. Veal and Lamb are commanding tolerably firm figures for most desirable offerings, but values show no quotable change. Hog market is weaker in tone and lower in price, with offerings on the increase.

Beef, first quality, dressed, net 3 lb.....	6 1/4 @ 6 1/2
Beef, second quality.....	6 @ 6 1/4
Beef, third quality.....	5 1/2 @ —
Mutton—ewes, 6 1/2 @ 7c; wethers.....	7 @ 7 1/4
Hogs, hard grain fed, medium.....	6 1/4 @ 6 1/2
Hogs, small, fat.....	6 1/4 @ 6 1/2
Hogs, large, hard.....	5 1/2 @ 5 3/4
Hogs, country dressed.....	7 1/4 @ 7 1/2
Veal, small, 3 lb.....	9 @ 10
Veal, large, 3 lb.....	7 1/4 @ 8
Lamb, spring, 3 lb.....	8 @ 8 1/4

### POULTRY.

No radical changes were effected in the poultry market the past week. Choice young stock was not in excessive receipt and sold to very fair advantage, in some instances an advance on quotations being realized for offerings which were especially desirable as to size and condition. Common qualities of old poultry were not eagerly sought after, even at the rather low figures current on this description. Eastern poultry was in heavier receipt than preceding week, and was taken in preference to ordinary domestic.

Turkeys, live hens, 3 lb.....	9 @ 10
Turkeys, live gobblers, 3 lb.....	8 @ 9
Hens, California, 3 dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 50 @ 5 50
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 00 @ 2 50
Ducks, old, 3 dozen.....	2 50 @ 3 00
Ducks, young, 3 dozen.....	3 00 @ 4 00
Geese, 3 pair.....	1 12 1/2 @ 1 25
Goslings, 3 pair.....	1 12 1/2 @ 1 37 1/2
Pigeons, old, 3 dozen.....	1 50 @ 1 75
Pigeons, young.....	1 25 @ 1 50

### BUTTER.

Quotable values for fresh have been further advanced since last report, but for other than most select qualities the market has not shown noteworthy strength at the advanced rates. Many of the consumers who are content with other than most select fresh, are taking held and packed butter in preference to ordinary qualities now being turned out by creameries and dairies. While market for common grades lacks firmness, some specials of established reputation are commanding above quotable values.

Creamery, extras, 3 lb.....	23 @ 24
Creamery, firsts.....	20 @ 22
Dairy, select.....	21 @ —
Dairy, firsts.....	18 @ 20
Dairy, seconds.....	16 @ 17
Mixed store.....	12 @ 15
Creamery in tubs.....	19 @ 21
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/4

### CHEESE.

There are no large supplies of domestic product of any description, and market is firm at the quotations, with very fair demand. In some instances favorite marks sell in a small way at slightly higher figures than are quotable. Eastern cheese is in very moderate stock and is quite steadily held.

California, fancy flat, new.....	10 @ 11
California, good to choice.....	9 1/4 @ 10
California, fair to good.....	9 @ 9 1/4
California Cheddar.....	— @ —
California, "Young Americas".....	10 1/4 @ 11 1/4

### EGGS.

Strictly choice to select eggs, uniformly large and white, were in limited receipt,



and market for this sort inclined against buyers. Some favorite marks, engaged ahead by special custom, sold above utmost figures warranted as a regular quotation. For ordinary qualities of fresh, such as showed heavy loss in candling, the market could not be said to be firm, such stock having to compete with cold storage eggs, the latter offering freely at comparatively easy figures.

California, select, large, white and fresh. 24 @25  
California, select, irregular color & size. 21 @23  
California, good to choice store. 16 @20  
Eastern, good to choice. 16 @20

## VEGETABLES.

Changes in quotable rates or the general tone of the market have not been very numerous or of a pronounced character since date of last issue. Onions were in quite fair demand and brought tolerably steady prices. Corn brought better average values than preceding week. Tomatoes were plentiful and sold at generally easy figures. Market for most other vegetables in season inclined in the main in favor of buyers.

Asparagus, 100 lbs. 75 @2 00  
Beans, String, 100 lbs. 1 1/4 @ 2 1/4  
Beans, Lima, 100 lbs. 4 @ 5  
Beans, Wax, 100 lbs. 2 @ 3  
Cabbage, choice garden, 100 lbs. 35 @ 40  
Cauliflower, 100 lbs. 40 @ 50  
Corn, Green, 100 lbs. 40 @ 75  
Corn, Green, Alameda, 100 lbs. 40 @ 1 25  
Cucumbers, Bay, 100 lbs. 20 @ 35  
Egg Plant, 100 lbs. 35 @ 50  
Garlic, 100 lbs. 2 @ 3  
Okra, Green, 100 lbs. 60 @ 85  
Onions, Yellow Danver, 100 lbs. 85 @ 95  
Peas, Sweet garden, 100 lbs. 2 @ 2 1/4  
Peas, good to choice, 100 lbs. 75 @ 1 25  
Peppers, Green Chile, 100 lbs. 35 @ 60  
Peppers, Bell, 100 lbs. 40 @ 65  
Squash Summer, 100 lbs. 20 @ 30  
Summer Squash, Bay, 100 lbs. 50 @ 75  
Tomatoes, River, 100 lbs. 40 @ 75  
Tomatoes, 100 lbs. 20 @ 30

## POTATOES.

Demand for shipment was fully as active as during preceding week, and prices realized were fully as favorable to selling and producing interest as last noted, the market ruling firm at the quotations. Prospects are favorable for a continuance of the comparatively stiff prices lately established. There seems to be every assurance that there will be an outside demand this season for the entire surplus of this coast at figures which will net at least a fair profit to the grower.

Burbanks, Salinas, 100 lbs. 1 25 @1 50  
River Burbanks, in boxes, 100 lbs. 1 15 @1 50  
River Burbanks in sacks, 100 lbs. 1 00 @1 30  
Mission Garnet Chile, in sacks. 1 00 @1 25  
Sweets, new, 100 lbs. 2 00 @2 50

## The Fruit Market.

## FRESH FRUITS.

The market as a whole did not show as good condition as previous week, receipts aggregating heavier, while the demand did not show corresponding improvement. Peaches were in materially increased supply and market for this fruit inclined in favor of buyers, especially for ordinary stock. Some extra choice Peaches, however, sold well and at an advance on quotations. Apples of high grade were not plentiful and brought fully as good prices as had been current for a fortnight or more. Apricots are in too scanty stock to quote, the season for this fruit being ended. Pears were in fairly liberal receipt and included many which were either too ripe or not sufficiently choice to be desirable for either shipment or canning; such stock met with a slow and weak market, but high-grade Bartlett's did not lack for custom, this sort bringing very good prices. Plums sold at about as good figures as prior to last review, canners being the principal operators. Grapes inclined to easier figures than had been ruling, and especially was the market for others than Seedless Sultanas and Muscats favorable to the consumers. Berries were in limited receipt, and market was slightly firmer for most kinds in season, but no very active demand was experienced at full current rates. Watermelons, Cantaloupes and Nutmeg Melons were all in good supply, and in fairly active demand at prevailing values.

Apples, Gravenstein, 4-tier box. 90 @ 1 15  
Apples, Alexander, 50-lb. box. 50 @ 90  
Apples, green, small box. 25 @ 40  
Blackberries, 100 lbs. 3 50 @ 5 00  
Cantaloupes, 100 lbs. 75 @ 1 50  
Grapes, Seedless, 100 lbs. 75 @ 1 00  
Grapes, Black, 100 lbs. 50 @ 75  
Grapes, Fontainebleau, 100 lbs. 50 @ 75  
Grapes, Muscat, 100 lbs. 50 @ 75  
Grapes, Tokay, 100 lbs. 65 @ 90  
Logan Berries, 100 lbs. 5 00 @ 6 00  
Nutmeg Melons, 100 lbs. 30 @ 50  
Peaches, 100 lbs. 25 @ 60  
Pears, Bartlett, 100 lbs. 20 @ 30  
Pears, Bartlett, 40-lb. box. 50 @ 1 00  
Peaches, Freestone, 100 lbs. 17 @ 25  
Peaches, good to choice Cling, 100 lbs. 25 @ 30  
Pears, other kinds, 100 lbs. 35 @ 60  
Plums, Green Gage, 100 lbs. 15 @ 20  
Plums, large size, 100 lbs. 20 @ 22  
Plums, 100 lbs. 30 @ 65

Prunes, 100 lbs. 30 @ 65  
Raspberries, 100 lbs. 5 00 @ 7 00  
Strawberries, Longworth, 100 lbs. 4 00 @ 6 00  
Strawberries, Large, 100 lbs. 3 50 @ 4 50  
Watermelons, 100 lbs. 6 00 @ 25 00  
Whortleberries, 100 lbs. 6 @ 8

## DRIED FRUITS.

The market for cured and evaporated fruits is showing less activity than has been lately experienced. It was not to have been expected, however, that buying would be kept up for a very long period at the active gait established a few weeks ago. The heaviest operators have been pausing to take breath, as it were, and also to take a survey of their surroundings, so as to ascertain just how they stand in the matter of holdings, qualities, etc. This applies more especially to Apricots and Peaches, these two kinds being decidedly the heaviest in evidence of recent purchases. The market for Apricots and Peaches is not quotably lower, nor is any quotable decline looked for. Only a lull, to permit dealers to straighten out stocks, which is a necessary sequence of all active purchasing. Apples continue firm, especially choice to fancy evaporated in boxes, the latter being quotable at 7 1/2c, and there are only moderate offerings at current values. Some business has been doing in Pears, mostly within range of 7@8c for prime to choice, but transfers have been mainly of small quantities, owing to light offerings. Figs in 1-lb. bricks, packed in 10-lb. boxes, are being offered at 5 1/2c, as to quality, for September delivery. Business in Prunes is practically at a standstill, largely due to differences existing between the Growers' Association and the packers. Asking rates by the Association were advanced to a 3c basis for the four sizes of Santa Claras, which certainly cannot be regarded a high figure, compared with other fruit values and considering crop conditions. Some non-Association Prunes are reported being contracted for future delivery at 2 1/4@3c for the four sizes.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime. 7 1/2 @ 8  
Apricots, Royal, choice, in sacks, 100 lbs. 8 1/2 @ 9  
Apricots, Moorpark. 9 @ 11  
Apples, in 50-lb boxes, rings, pressed, fancy. 7 @ 7 1/2  
Apples, 50-lb boxes, rings, pressed, good to choice. 6 1/2 @ 7  
Nectarines, 100 lbs. 5 @ 7 1/2  
Peaches, unpeeled, fancy. 7 1/2 @ 8  
Peaches, unpeeled, choice. 6 @ 6 1/2  
Peaches, peeled, in boxes. 12 @ 14  
Pears, halves, choice to fancy. 7 @ 8  
Plums, Black, pitted. 4 @ 4 1/2  
Plums, White and Red. 5 @ 6  
Prunes, Silver. 4 1/2 @ 6

## COMMON SUN-DRIED.

Apricots. 5 1/2 @ 6 1/2  
Apples, sliced. 2 1/2 @ 3  
Apples, quartered. 2 1/2 @ 3  
Figs, Black. 3 @ 3 1/2  
Figs, White. 3 1/2 @ 4  
Peaches, unpeeled. 4 @ 5  
Pears, prime halves. 4 @ 5

## RAISINS.

Nothing of consequence doing in the raisin market, especially as regards transfers from first hands. There are so few raisins now in the hands of growers, and practically none of other than low grade, that for the time being it is useless to attempt to quote.

## CITRUS FRUITS.

Oranges are offering in moderate quantity, mostly late Valencias, but demand for them is very limited. Prices remain quotably as last noted. Lemon market shows steadiness, values being fairly well maintained at last quoted advance, although market is hardly so active as a week or two ago. Limes are being in the main rather firmly held, stocks being of only moderate proportions and in few hands.

Oranges—Valencias, 100 lbs. 3 00 @ 4 00  
Lemons—California, select, 100 lbs. 3 50 @ 4 00  
California, good to choice. 2 50 @ 3 00  
California, common to fair. 1 50 @ 2 00  
Limes—Mexican, 100 lbs. 7 50 @ 8 00

## NUTS.

Spot market for both Almonds and Walnuts is inactive at nominally unchanged quotations. Contra Costa almond growers will open bids at Brentwood on the 17th inst. for about 67 tons. About 36 tons of Almonds are to be awarded to highest bidder at Winters on Sept. 30th. Peanuts are in very moderate stock, both imported and domestic, and values are practically as last quoted.

California Almonds, shelled. 18 @ 22  
California Almonds, paper shell, 100 lbs. 12 @ 14  
California Almonds, soft shell. 10 @ 12  
California Almonds, hard shell. 6 @ 7  
Peanuts, California, fair to prime. 4 1/2 @ 5 1/2  
Peanuts, Eastern, hand-picked. 5 1/2 @ 6  
Pine Nuts. 5 @ 6

## WINE.

There is a firm tone to the wine market, but there is virtually nothing doing in the way of transfers from first hands, there being practically no wines of 1900 vintage now being offered by producers. Wholesale values for dry wines have not

yet been established over 22@25c. per gallon, but it is likely that transfers of this year's vintage will be effected at higher figures. Wines grapes now maturing have been contracted for at \$25@30 per ton, and it is reported that in some instances an advance on latter figure has been realized for small lots of especially desirable stock.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks. 82,650	594,232	652,647
Wheat, centals. 8,085	445,450	684,913
Barley, centals. 40,895	293,105	610,675
Oats, centals. 23,460	123,881	115,418
Corn, centals. 5	11,635	6,857
Rye, centals. 1,260	4,055	4,205
Beans, sacks. 3,566	12,927	17,602
Potatoes, sacks. 21,405	135,754	141,124
Onions, sacks. 5,634	34,117	21,356
Hay, tons. 1,892	17,720	26,767
Wool, bales. 2,008	9,822	3,288
Hops, bales. 11	11	200

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks. 124,780	402,580	350,540
Wheat, centals. 25,786	391,028	678,072
Barley, centals. 22,820	52,883	256,908
Oats, centals. 4,329	525	21,967
Corn, centals. 50	536	2,812
Beans, sacks. 8	308	165
Hay, bales. 168,700	233,621	7,383
Hops, pounds. 320	13,388	166
Honey, cases. 152	469	166
Potatoes, pack's. 77	5,646	2,139

## California Dried Fruit at New York.

NEW YORK, Aug. 14.—Evaporated apples, common, 5@7c; prime wire tray, 7 1/2@8c; choice, 8@8 1/2c; fancy, 8 1/2@9c.  
California Dried Fruits.—Offerings light and market firm, with demand fairly active.  
Prunes, 3 1/2@7c.  
Apricots, Royal, 8 1/2@13c; Moorpark, 9 1/2@14c.  
Peaches, unpeeled, 7@9 1/2c; peeled, 11@15c.

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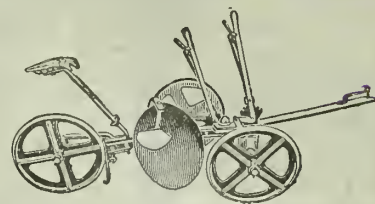
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190-192 Prince St., New York City.



## Rotary Disc Plows.



All the plow manufacturers have been making experiments of this style of plow, and this is evidence that they see sufficient merit in the principle of the disc plow to try to determine if they can make the plow so that it will do good work under all conditions. The Benicia Agricultural Works of Benicia, Cal., evidently have struck upon the right model, for they have placed orders to put up over 1000 of these plows for next season. From all accounts, it will be a surprise to other disc plow manufacturers, and many applications for agencies are already being made to the selling agents, Baker & Hamilton, San Francisco, Sacramento, Los Angeles.

## Roofing Reasons

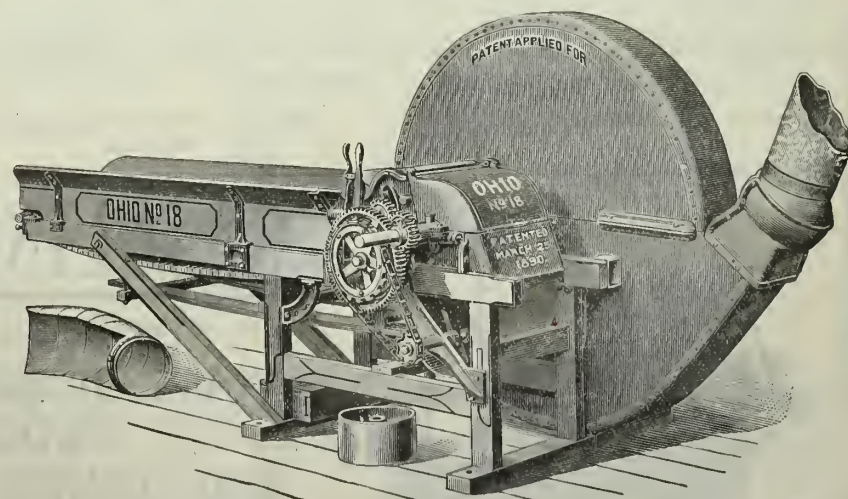
The reason the best builders use P & B Ready Roofing is because it gives better service with less cost and less labor than any other roofing made.

P & B Ready Roofing is manufactured for roofing purposes and is made of just the right materials in the right way to make a perfect roof.

P & B Ready Roofing has years of service to prove its value, in fact if you paid ten times its price you could not get a more satisfactory roofing. It's far better than tin, iron, shingles, slate, or tar, and doesn't cost so much to lay or transport—it will last longer and give better results.

Send for booklet.

Paraffine Paint Co.  
116 Battery Street, San Francisco



## "Ohio" Self-Feed Ensilage Cutter,

—WITH DIRECT-BLAST BLOWER ELEVATOR.

Self-Feed. Saves Labor and Earns Dollars. Will Deliver the Cut Ensilage Into Any Ordinary Silo.

THESE MACHINES EXCEED ALL OTHERS IN WIDTH OF THROAT AND CAPACITY.  
WRITE FOR CATALOGUE AND SEND 10c. FOR BOOK ON SILAGE.

HOOKE & CO., 16-18 Drumm St., San Francisco, Cal.



## FRUIT MARKETING.

### Our Cured Fruits in England.

TO THE EDITOR:—I have just returned from a four months' trip to England, and it may interest some of your fruit-growing readers to know that our dried fruits are much more generally in use than when I left eight years ago.

In London and many of the large towns good displays were to be seen in the shop windows that would shame the display in our own or Eastern stores—in fact, they try to make it look attractive as compared with the generally dirty and ill-kept bins and boxes too often to be seen in this country.

Seeing so much in the retail shops, I was anxious to find the wholesale houses. On visiting some of the largest of these, I was pleased to find them so well in touch with California, and your prune growers may be glad to know that at these warehouses I found Mr. President Bond had already been pressing the claims of our fruit.

For some reason which nobody seemed able to explain, the peach is not popular, while the pear and apricot have a ready sale. Nearly all the prunes which came under my notice were Bosnian; they seemed less sweet than ours and nowhere did I see any exceptionally large ones—in fact, I question whether any sold loosely from the boxes would average more than 60s after processing, and some were decidedly moist.

I took a considerable quantity of fruit with me and placed it in over forty houses, and the general opinion was that it was better than that usually offered for sale, and in some cases when the purchased prunes were served at the same time, the extra meatiness of the Californian was very apparent.

I think there is a good market for our dried fruit at remunerative prices, but the higher grades must be put up in more tempting form. If these, and especially the prunes, were put up in say five or ten pound boxes, paper lined, they would sell at paying prices. It ought not to add more than one cent per pound to put them on the distant market, in small light boxes; and as they are now selling at from 12 to 20 cents per pound, that is not a large proportional increase.

As to the Californian wine: Its brand, the Big Tree, was everywhere, but the wine drinkers told me that our wine was too heavy to become popular. One remarked that he was used to a bottle of claret

for lunch, but half a bottle of Californian was too much on which to return to work. Perhaps even the wine maker will find it pays to cater to the taste of the drinker, and all will find that it pays best to give the best that can be produced and put it on the market in the most attractive form.

I would also suggest that cards of instructions as to cooking, etc., be placed in all small boxes, and it might be well to give instructions to the merchants as to reprocessing, etc., and save the sodden article which sometimes takes the place of the overdry.

Rylstone Ranch, Redding. WM. JAS. HILL.

### Cabled Prune Prices.

TO THE EDITOR:—We beg to inclose copy of a report by cable from the U. S. Consul at Bordeaux, France, on the size, quality and opening prices of the new prune crop in his consular district. Previous reports by mail show that last year's crop was large and that the possibilities of this year's crop being equal to it were remote, this view now being confirmed by cable by the statement that this year's crop is estimated to be 25% less than last year's.

The Bordeaux grading of prunes on which prices are quoted is shown in the cable, as well as the approximate equivalent of each under the American grading.

PACIFIC COMMERCIAL MUSEUM.

San Francisco, Aug. 10.

Size of prune crop estimated 25% less than last year; crop runs above average in size and quality. Opening prices for September delivery, on the wharf at Bordeaux, are as follows:

Size.	Size.
Bordeaux grading.	American grading.
50 to 55 per 1/2 kilo equals	45 to 50 per pound, 8 1/2c.
60 to 75 per 1/2 kilo equals	55 to 60 per pound, 7c.
70 to 75 per 1/2 kilo equals	65 to 70 per pound, 6c.
100 to 105 per 1/2 kilo equals	95 to 100 per pound, 5 1/2c.

## THE POULTRY YARD.

### American Breeds of Fowls.

The Bureau of Animal Industry of the U. S. Department of Agriculture is giving merited recognition to the poultry interest by undertaking what promises to be a very elegant series of bulletins on

"American Breeds of Fowls," treating the subject historically, analytically and pictorially in a very excellent way. The first of the series is devoted to the Plymouth Rocks, and the introductory note by Dr. Salmon, chief of the Bureau, is a well-earned tribute to the breed:

The Plymouth Rock breed is the most popular creation of the American fancier's art. It is not only a beautiful bird, but as a general-purpose fowl it is unsurpassed. It is medium in size, excellent for the table, a good sitter, and, at the same time, rivals the smallest breeds in activity, hardiness and egg-laying propensities. It is a favorite breed for the production of broilers and capons, and in the show room it excites the admiration and enthusiasm of all who love to see beauty and symmetry in our domesticated birds.

Nearly everyone is more or less familiar with the general appearance of the Barred Plymouth Rock, but there are comparatively few who understand the different points of these birds, the defects which the farmer tries to avoid, and the ideals of perfection towards which he is striving. The plumage of birds has an even greater effect in the characterization of breeds than have the coats of other farm animals, and hence the breeders pay special attention to the body color and the marking of the feathers on different parts of the body. Those who are strictly utilitarian in their aims may think that too much attention is paid to the feathering; but it should be remembered that the perfection of feathering and the ability to transmit this standard is an evidence of pure breeding and prepotency. Nor should the aesthetic element in the breeding of farm animals be entirely discarded. Beauty of form and beauty of coloring, bred according to a standard of perfection and developed almost to the exact ideals of that standard, serve to excite interest and enthusiasm beyond what can be realized by utilitarian qualities alone.

Considerable attention is given by the author of the bulletin to the plumage, the standard requirements and the methods of breeding by which these are best secured. These are the points upon which information is perhaps most needed. The Buff and the White Rocks receive their due share of attention. T. F. McGrew, who has prepared the bulletin, is a well known judge of poultry and a prolific writer on questions relating to breeds and breeding. The illustrations were made by George F. Howard, and have received the approval of some of the most skillful breeders of these birds.

# State Fair of 1901

At SACRAMENTO, CAL., September 2d to 14th.

## Greatest Race Meeting in the State.

Two Weeks of Running, Trotting and Pacing. Famous Horses will Race.

### DRAFT HORSES, SWINE, AND SHEEP.

The Pick of the World. Come and see the Highest Types of Farm Animals.

### CATTLE—BEEF AND DAIRY BREEDS.

Grand Animals—See them and try to breed some like them.

### GREAT POULTRY SHOW. All Standard and Fancy Breeds.

### PAVILION EXHIBIT OF CALIFORNIA'S FINEST PRODUCTS. Fruits, Cereals, Hops, Wines, Oils, Grasses, and Fibers.

Band Concerts, Art Display, Meeting of the State Dairy Convention, Dairy Exhibits, Farm Machinery.

## COME TO THE FAIR.

Know your State, and try to grow and make and breed as good as those you see.

EXHIBITS CARRIED FREE. EXCURSION RATES TO VISITORS.

For Particulars and Premium List, apply to

GEORGE W. JACKSON,  
Secretary.

A. B. SPRECKELS,  
President.



President Rogers of the Automobile Club of California demonstrating in Golden Gate Park to Park Commissioner McDonald that Automobiles frighten a very small percentage of horses. Carriages used were No. 5 and No. 2 "Locomobiles."

## The "Locomobile" Company of the Pacific,

Send for Catalogue.

1622 MARKET STREET, SAN FRANCISCO, CAL.

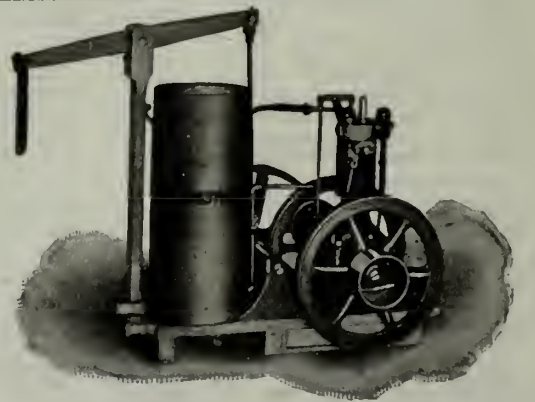
# GASOLINE ENGINES

THEY ARE USED TO OPERATE  
PUMPS, CHURNS, FRUIT GRADERS,  
WOOD SAWS,  
SEED CLEANERS, BONE GRINDERS,  
AND OTHER DUTIES.

FOR FULL PARTICULARS, ADDRESS

## FAIRBANKS, MORSE & CO.,

310 Market St., SAN FRANCISCO. 136-138 Los Angeles St., LOS ANGELES. First and Stark Sts., PORTLAND.





330 Market St., San Francisco, Cal.



## Tuttle's Elixir



Cures all species of lameness, curbs, splints, contracted cord, thrush, etc. in horses. Equally good for internal use in colic, distemper, founder, pneumonia, etc. Satisfaction guaranteed or money refunded. Used and endorsed by Adams Express Company.

**TUTTLE'S FAMILY ELIXIR** Cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience" FREE.  
Tuttle's Elixir Co., 88 Beverly St., Boston, Mass.  
487 O'Farrell St., San Francisco, Cal.  
Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief if any.

### THE VINEYARD.

#### What Resistant Vines Have Done.

In the course of a controversy over the success or failure of resistant vines, F. T. Bioletti of the University of California states some points which are of wide interest. The department of Herault in the south of France produces more wine than any other department, and, in fact, more wine than any equal area in the world. Of the 453,000 acres of vines grown there in 1899, 440,000 acres were on resistant stock, and the crops obtained per acre now are larger than were obtained before the advent of the phylloxera, when the vines were on their own roots. During the period of greatest wine production in Herault—1865 to 1874—the mean annual yield was 336,000,000 gallons, while during the period when the effect of the phylloxera was at a maximum—1880 to 1899—the mean annual yield was only 93,000,000 gallons. The wine production for 1899 and 1900 has averaged 315,000,000 gallons. This corresponds to a crop of forty-seven tons of grapes per acre on 453,000 acres if we reckon 150 gallons of wine as the equivalent of a ton of grapes. This is really a very large crop when we consider that it is the average for a whole district, and includes all vines, both young and old. A comparison of these figures with the viticultural statistics which have been published regarding California will show emphatically that the growing of grapes on resistant roots is a success so far as regards the amount of crop obtained. The average production of wine in California, according to the most reliable statistics available during the decade 1888 to 1897 has been 17,270,000 gallons, and the area of wine vineyards has been variously estimated at 75,000 to 80,000 acres. Taking the smaller figure, this represents a crop of only 1.5 tons per acre, and even if we suppose that half the vines were young or dying from the effects of phylloxera, the average crop would then be only three tons per acre, which is not a very favorable showing when compared with the 4.7 tons per acre yielded by the vines of Herault, of which 97% are on resistant roots.

This complete re-establishment of the vineyards of a whole district on resistant roots has taken place in less than twenty years, which is a comparatively short time when we consider the delay caused by the numerous mistakes which were unavoidably made in the beginning. In California we are in a position of advantage, as we can learn from the mistakes and successes of these twenty years of trial and experiment, and can at present plant a vineyard on resistant roots with as certain a prospect of success as is possible in any horticultural venture. We have, of course, our own peculiar difficulties of soil and climate, and it has been the endeavor of the Agricultural Experiment Station at Berkeley to solve the questions entailed by these conditions.

I do not wish to convey the impression that establishing a vineyard on resistant stock is all plain sailing. To do it successfully requires a certain amount of knowledge and skill, which everyone does not possess. This, however, is far from a disadvantage. Any business that is "as easy as falling off a log" is sure to be unprofitable, as everybody who has skill enough to fall off a log is liable to rush into it. I would urge, therefore, any young readers who contemplate planting grapes to read what

literature they can find on the subjects of phylloxera and resistant stocks, and then to visit the vineyards of the pioneers in the business in Sonoma, Napa and Contra Costa, see what they have done and profit by their experience.

The United States is a large buyer of Indian products, taking about 60% of the jute manufactures, in the form of gunny bags and cloth, and nearly 15% of the raw jute exported. The Pacific coast pays the chief part of this tribute to Asiatic industry.

### Breeders' Directory.

#### HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except list on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER Saxe & Son**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**JERSEYS, HOLSTEINS & DURHAMS**. Bred specially for use in Dairy. Thoroughbred Hogs, Poultry, William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**J. H. GLIDE**, Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A.J.C.C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

#### POULTRY.

**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**WILLIAM NILES & CO.**, Los Angeles, Cal. Nearly all varieties chickens, geese, ducks, peafowl, etc.

**SANTA TERESA POULTRY FARM**, Eden Vale, Santa Clara Co., Cal. Illustrated catalogue with show record for 1900, free. Agents Eclipse Aluminum Leg Bands; sample 2 cts.

**FORTHOROUGHED FOWLS** in small lots, address Cottonwood Farm, Pleasant Grove, Cal.

**MEAT MEAL**. Best quality. Lowest price. A. Warren Robinson, Napa, Cal.

**BRONZE TURKEYS**. Ed. Hart, Clements, Cal.

#### SWINE.

**BERKSHIRE, POLAND-CHINA & DUROC HOGS**. Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**POLAND-CHINAS**.—Spring pigs \$15.00 to \$20.00 each. S. P. Lindgren & Sons, Kingsburg, Cal.

**50 HEAD CHOICE POLAND-CHINA HOGS** from recorded breeders. Boars 8 to 10 months old; fit to head any herd. P. H. Murphy, Perkins, Cal.

**BERKSHIRE HOGS**, headed by the great boar Artful Lee 52630. S. B. Wright, Santa Rosa, Cal.

**THOS. WAITE**, Perkins, Cal. Breeder Reg. Berkshires. Sweepstakes State Fair and Tanforan, 1900.

**CHAS. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs

#### BREEDERS' SUPPLIES.

**POULTRY** supplies of all kinds. Send for my new price list and booklet, "HOW TO FEED FOWLS FOR PROFIT." CROLEY, 508 Sacramento St., San Francisco, Cal.

### FANCY POULTRY.

We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators. Wire Netting, Blooded Fowls and Poultry Appliances generally. Publishers of the Pacific Coast Poultryers' Hand-Book and Guide. Price 40c. postpaid.

**PACIFIC INCUBATOR CO.**, 1317 Castro Street, Oakland, Cal.



### LUMP JAW

Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the absolute cure of Lump Jaw, free to readers of this paper. Fleming Bros., chemists, Union Stock Yards, Chicago, Ill.

### Cocoanut Oil Cake.

THE BEST FEED FOR STOCK, CHICKENS AND PIGS.

For sale in lots to suit by **EL DORADO LINSEED OIL WORKS CO.** 208 California St., San Francisco, Cal.

**RED SEAL**  
98% PURE  
**LYE**  
OR POTASH

**RED SEAL**  
**LYE**  
OR POTASH

**98 % TEST**

**THE BEST FOR SPRAYING**

There are many sprays on the market, but Red Seal Lye has stood the test for years. No scale can survive a spray of Lye, when hatching.

Red Seal Lye is 98 per cent pure; other brands range from 40 to 60 per cent. Red Seal is comparatively much cheaper, and never disappoints.



THE above represents our SAN JOSE GRADER, of which there are more in use than of all other makes. The sales of the former to date double that of that of any former season. It will pay you to see our late improved grader before purchasing.

EVERY DRY YARD SHOULD HAVE OUR SAN JOSE ROLLER GRADER.

We carry Cannery Supplies, Orchard Trucks of all kinds, and a full line of Dipping and Processing Apparatus.

WRITE FOR CATALOGUE AND MENTION THIS PAPER.

**Barngrover, Hull & Co., San Jose, Cal.**

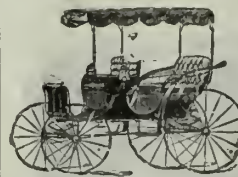
### Dip & Wash (for Live Stock)



Dipping, washing or spraying live stock is essential for the cure of Scab, Mange, Itch, etc., and for killing and removing ticks, fleas, lice, etc. **Lincoln Dip** is composed of nicotine, sulphur and valuable oils, but contains neither lime nor arsenic. It is effective but not poisonous or injurious. Write for literature upon treatment of stock for skin parasites.

**PASTEUR VACCINE CO.**, 152 E. Huron St., Chicago.

BRANCH OFFICE: Room 37, Sheldon Building, San Francisco, Cal.



### BUGGIES!

Good ones, with leather quarter top, 3000-mile axle, etc., etc., \$55.00. WE GUARANTEE 'EM. No old style goods—all up to date—just from factory this week. We have everything on wheels: Carriages, Runabout Wagons, Freight and Farm Wagons, etc. WRITE OR CALL.

**ALLISON, NEFF & CO.**,

222 MISSION STREET.....SAN FRANCISCO, CAL.

## ORDERS ARE COMING IN

for spring pigs. We have shipped a few and have orders entered for others to be shipped when old enough. We sold two of the three hogs advertised the past few weeks and now offer the remaining Poland-China sow farrowed June 25, 1900, sired by Missouri's Best U. S. 46355 and out of Happy Queen 134192 sired by the great \$4000.00 boar Happy Union 41111. Write us for particulars.

**SESSIONS & CO.**, Lynwood Dairy & Stock Farm, 117 E. 23rd St., LOS ANGELES, CAL.

## EMERY'S PURE MEAT MEAL

### FOR POULTRY.

We have put in new machinery especially adapted for the manufacture of this Pure Meat Meal. Our stock is received fresh every morning and in five hours it is sacked and ready for shipment. Ours is the only genuine odorless Meat Meal on the western market. Sample free. Try it for your poultry.

**N. OHLANDT & CO.**, Indiana and Yolo Sts., San Francisco. (Successors to Emery Fertilizer Co.)

### \$50.00 RANGE FOR \$25.00

#### TO INTRODUCE THE

**WILLARD STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/4 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. **WM. G. WILLARD**, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Dept. 8. Will ship C. O. D. with privilege of examination.







## THE APIARY.

### Southern California Honey.

Bee men, like grain and hay farmers, have been playing in bad luck for three years in southern California. Honey has been scarce, and consequently very dear. This year there is a good crop. Views differ as to how good. One expert buyer, who ought to know, reports the Los Angeles Times, said: "There will not be 100 carloads of honey south of the mountains." When this was told another buyer who ought to be well informed he said: "There will be 150 cars, perhaps 200 cars." Like other crops, the early promise was great. When the fogs came the bees kept in the hives, refusing to work in the damp flowers. After the June fogs passed, the sagebrush at once began to dry up and the bee food became scarce. Other reports say the bees are working now as busy as bees and that the honey crop will be good.

A full crop means 250 carloads of honey. When there is that much prices go to 3 or 4 cents per pound for extracted honey. During the seasons when there were only about fifty carloads or less a year and prices went up as high as 10 cents.

It is hard to come down from so high a point to a normal level. That is the difficulty now. Buyers who ship honey to the East say 3 cents for dark to 4 for light amber and 4½ for water-white honey is all the market will stand. Bee men who have had three bad years want to get "all there is in it," and hold for ½ cent per pound more.

Those who think there are not more than 100 carloads in the section say bee men will get what they ask and that the buyers will soon come to time. Those who see 150 or perhaps 200 carloads say the bee men will soon give way and meet the market at 3½ to 4½ cents.

### Youth and Age.

Our esteemed contemporary, the Pomona Times, is disposed to comment upon our affairs as follows: "The PACIFIC RURAL PRESS has commenced its sixty-first volume, but it still has the bright, attractive appearance of youth with all the dignity its age gives it. It's a magnificent journal and is doing a world of good for the agricultural and horticultural interests of the State."

**TULARE LAKE RECEDING.**—Hanford Sentinel: H. C. Tandy came up from Tulare lake last week and states that the water in the lake is rapidly crawling back, owing to the great evaporation during the present hot weather. The levees are now all standing on dry ground and the water will soon be out of sight from these places. Mr. Tandy does not think the lake will dry up this season, but he expects it to recede until it assumes the size of the body of water in the lake bottom three years ago, or the year previous to the drying up. If no amount of water goes into the lake bottom next season, a year from the coming fall will see Tulare lake again a thing of the past.

### How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by him.

WEST & TRAU, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.

Hall's Family Pills are the best.

**HORSES DIE FROM UNKNOWN CAUSE.**—Red Bluff News: About two weeks ago John Thomas, who is farming on the old M. B. French place, on Red Bank creek,

started for the mountains and left five head of horses on the ranch where there was plenty of feed and water for them; but in that time four of the animals have died, from what cause none of the neighbors have any idea. Two of the animals were a pair of fine large mares, for which Mr. Thomas had been offered \$250. The other two were also good horses.

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING JULY 30, 1901.

679,588.—COOKING UTENSIL—C. A. & O. Anderson, Portland, Or.  
679,451.—WATER HEATER—M. M. Baker, S. F.  
679,711.—GAS GENERATOR—E. Berg, S. F.  
679,453.—PRINTING PRESS—E. Carlson, Los Angeles, Cal.  
679,453.—LEVEL—B. B. Chandler, Jr., Nevada City, Cal.  
679,666.—SMOKE CONDENSER—L. E. Clauson, S. F.  
679,605.—CAN OPENER—T. A. Darling, Anaheim, Cal.  
679,667.—INVALID'S TABLE—S. M. Davis, S. F.  
679,668.—TYPE WRITER—W. H. Flanagan, Grants Pass, Or.  
679,311.—FLOOD COOLER—J. R. Hansen, S. F.  
679,383.—LAWN SPRINKLER—L. Horvath, Los Angeles, Cal.  
679,621.—TRUCK—B. H. Hulthrd, Sacramento, Cal.  
679,384.—DRILL—J. M. Kellerman, Los Angeles, Cal.  
679,424.—PLANE—L. Kemline, Pinole, Cal.  
679,629.—CAR COUPLING—W. S. Lennon, Tucson, Ariz.  
679,393.—WELL CASING—A. L. McPherson, Oakland, Cal.  
679,703.—MITERING DEVICE—J. M. J. Phelan, S. F.  
679,637.—ENGINE—E. E. Redfield, Grants Pass, Or.  
679,516.—BOTTLE STOPPER—J. Senich, Pasadena, Cal.  
679,430.—ELEVATOR—A. P. Tatterson, Stockton, Cal.  
679,656.—MATTRESS HOLDER—C. A. Whiting, Tacoma, Wash.  
679,489.—FLOW—J. A. Wiehe, Adelaide, Cal.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**BICYCLE BRAKE AND SUPPORT.**—No. 677,804. July 2, 1901. J. Schulte, Jr., Monterey, Cal., assignor of one-half to H. J. Henneker. This invention relates to an adjustment for bicycles, which serves the double purpose of a brake and as a support to retain the bicycle in an upright position when not in use. It consists of a pivoted turnable structure, having a shoe adapted to contact with the ground; a foot piece turnable about the pivot point to depress the shoe; a catch or latch mechanism to hold it after the shoe has been brought into contact with the ground, and a releasing device and returning spring to throw the parts into their normal position when the brake is not in use.

**APPLIANCES FOR LOGGING RAILWAYS.**—No. 678,090. July 9, 1901. Nelson Young, Eureka, Cal. This invention relates to an improved device for use in logging camps, to prevent the twisting of the heavy cables by which the logs are drawn through the woods. It consists in combination with a road bed and a surface-traveling traction cable, of a triangular plate secured at one apex to the cable, the base of said plate being adapted to rest upon the ground at right angles to the line of travel. There are means central of this base whereby a sled may be attached, and guides disposed at the inner sides of the curves in the road bed whereby the center of the base of the plate is made always to travel central of the road-bed.

**VEHICLE WHEELS.**—No. 678,025. July 9, 1901. G. V. Orton, Monterey, Cal., one-twentieth assigned to David Jacks, same place. This invention relates to improvements in wheel attachments whereby the tire and rim are held together without the use of bolts or similar holding devices, and whereby the spokes may be tightened and the felloes expanded whenever necessary. It consists essentially of a peripheral channel formed on the inner side of the tire, a peripheral projection upon the rim fitting said channel, a dowel key whereby the alignment of the felloes is maintained and by which they are expanded, a seat for the spoke tenons, a jam-nut by means of which the spokes may be tightened, and of other details.

**CAN HEADING MACHINE.**—No. 678,494. July 16, 1901. W. T. Jones, San Francisco, Cal. One-half assigned to Henry Doyle. The object of this invention is to provide an apparatus for automatically placing the heads of cans in position upon the bodies. It consists of a horizontal endless conveyor upon which the cans are carried throughout the operation, a stop lever which regulates the admission of cans thereon, a revolving spacing and timing guide, a can-head feeder in which the can heads enter, and means by which the flanges of the heads are prevented from overlapping, a revolving carrier by which the heads are taken singly from the feeder and delivered into dies upon a revolving support, and the heads then placed upon the cans and crimped thereon.

**CULTIVATOR.**—No. 678,489. July 16, 1901. T. J. Huhbell, Watsonville, Cal. Assigned to Drusilla Huhbell and Wm. H. Ames of same place. This invention relates to a land cultivator, and consists in a means by which the adjustable tooth-carrying frame may be expanded transversely to cut as wide a space as possible, or contracted to adjust it for travel between rows of trees, plants or vines which may have different spaces between them.

**ADJUSTABLE INVALIDS' TABLES.**—No. 679,667. July 30, 1901. S. M. Davis, San Francisco, Cal. This invention is for the purpose of providing a convenient table attachment for beds, which is adjustable and extensible for the use and convenience of the invalid. It comprises an open-center frame, in which an arm is pivotally secured and which is movable therein in a vertical plane, a tray or holder portion attached to this arm, a means by which they may be supported in a horizontal position, and by which the arm and tray may also be held in a vertical position within the open center of the frame.

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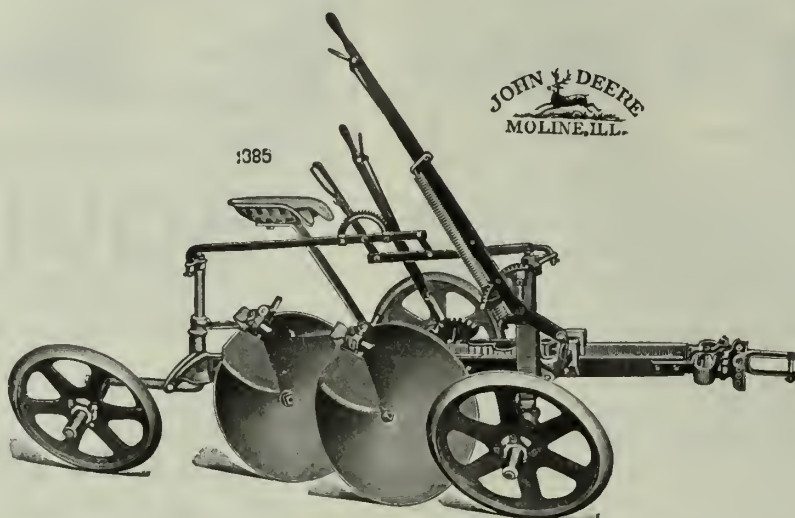


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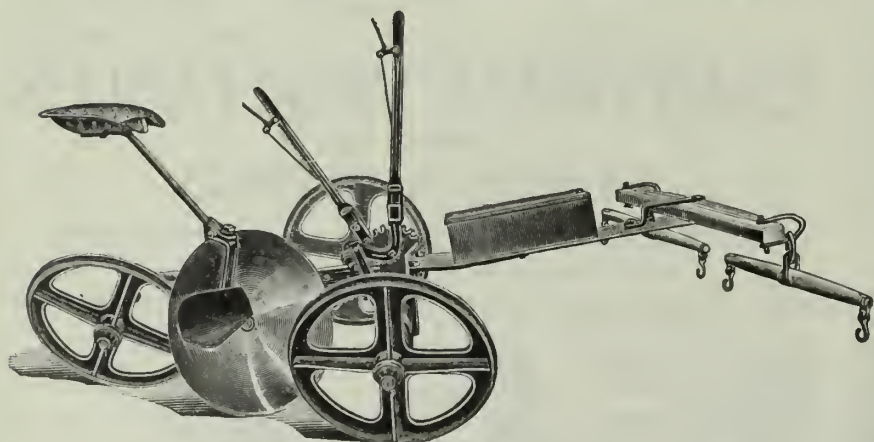
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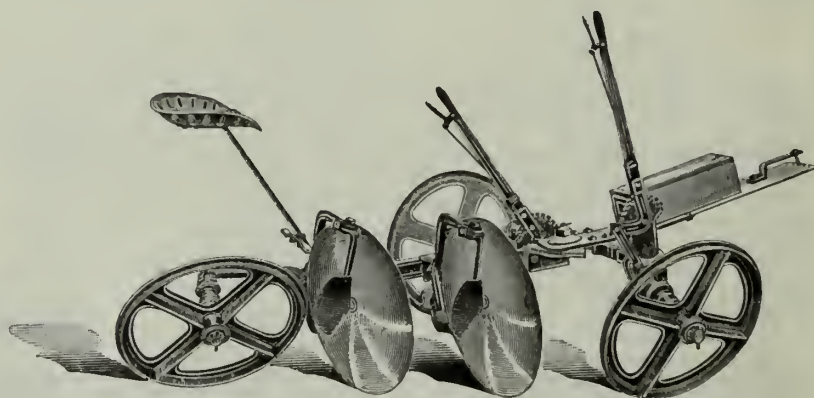
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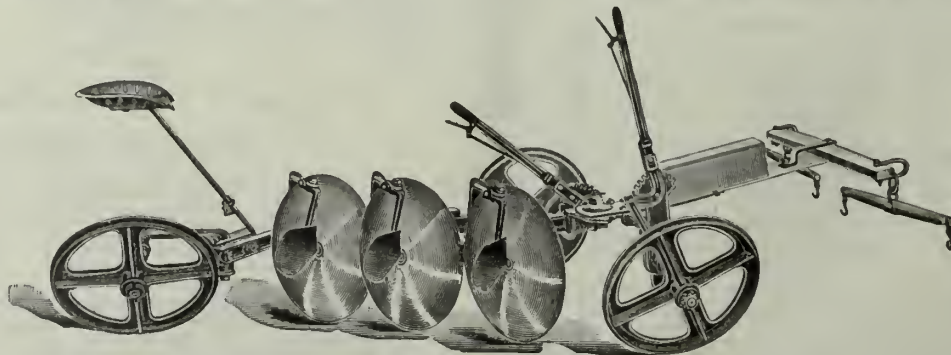
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## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 8.

SAN FRANCISCO, SATURDAY, AUGUST 24, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Trees in the Great Valley.

Ever since the vast treeless plains of the interior valley of California were first looked upon with serious agricultural interest the desirability of tree planting has been earnestly urged by men and women of science, esthetics and sentiment, and the agitation has to a certain extent influenced land owners. The landscape in most parts of the valley has shown some gain in arboreal features during the last quarter of a century, and still there is ample room for agitation and action along the same old lines. We take our little shot at the old target through the suggestiveness of the two valley pictures which appear on this page.

First, we have a typical valley scene in the grain districts. As one passes down the Sacramento and up the San Joaquin, traversing the stretch of nearly 400 miles from Red Bluff to Bakersfield, he will see so many expanses of open prairie that he might conclude that half a century of preaching about planting trees had accomplished nothing, and that all the glorious valley oaks had fallen before the clearer's ax. The fact is, however, quite different. Take, for instance, Kings county, in the heart of the San Joaquin valley, where the photographer secured the scene, with the many teams projected against the skyline. Kings county has such scenes as this, but it also has charming landscapes of native and introduced tree growths, and can fairly claim, for a California valley county, to be well watered and well wooded. Thus it is with many other valley counties, and those who pass through by rail see the worst and lose the best of the valley scenes. Still there are vast stretches of open land which should be reclaimed from such vacancy by tree planting, and, fortunately, there is now much better data as to the success of the various trees under arid valley conditions than were available a few years ago. This practical information has been developed in part by systematic work on the part of the experiment stations and in part by the zealous efforts of private planters here and there all over the valley. Our columns frequently note the success and suitability of



Plowing for Wheat on the Plains of Kings County.

certain trees for valley situations. Almost everywhere the new comer can without very great driving visit the home places of different old residents and see what different trees are doing and take from what he sees and hears safe suggestions for his own plantings.

It would unquestionably be a great advantage to have the valley crossed at right angles to prevailing winds, with timber belts, checking the sweep of winds and giving orchards and other plantations very desirable protection. This proposition brings us to the second picture, which represents a piece of wind-break grown at the University Forestry Station near Chico, Butte county. It is a view of a block of *Pinus resinosa*, which is particularly interesting because it is not the Monterey pine or *Pinus insignis* which has been planted so widely and has done so

well in the interior. This block of *resinosa* was planted in 1889, and ten years thereafter the trees averaged 30 feet high and girthed 21 inches, according to the report made by Mr. C. H. Shinn, inspector of the University Experiment Stations. This is somewhat less than the height of the Monterey pines. The general appearance of a block or grove of *Pinus resinosa* is superior to that of *insignis*, which may be a very important point with home planters, but for single specimens the *insignis* is apt to be handsomer. Of other evergreens at the Chico station, Mr. Shinn notes that the Italian cypress (*Cupressus sempervirens*) is doing well, showing, however, much irregularity of form.

What can be done in the interior valley with several different trees is shown by Mr. Shinn's notes on specimen trees on the famous Rancho Chico of the late General Bidwell. General Bidwell began to plant native California trees as early as 1856, and added to his arboretum many of the finer exotics, until his collection is in some important particulars one of the finest on the Pacific coast. The most of his tree planting was done in 1868, but it has been continued at intervals ever since. Many specimens of *Pinus sabiniana* and *Pinus ponderosa* planted in 1856 now have trunks of from 8 feet 10 inches to 11 feet in circumference, and are more than 100 feet high. Of *Sequoia gigantea* and *S. sempervirens*, there are many specimens 80 and 90 feet high and girthing from 4 to 5½ feet. A native cottonwood (*Populus Fremontii*), which has grown to its present size since 1856, measures 16 feet in circumference of trunk and is 100 feet high. Among trees planted about 1868 are the following: *Quercus robur*, 50 feet high, girth 25 inches; *Quercus cerris*, 45 feet high, girth 22 inches; *Juglans Californica*, 80 feet high, girth 13 feet; *Salisburia adiantifolia*, 40 feet high, girth 3 feet 3 inches; *Camphora officinalis*, height 70 feet, girth 6 feet 4 inches. Another camphor girths 9 feet, but is of more spreading habit. The growth of many American oaks, of pecans and hickories, of the *Liriodendron*, the European linden, elms, and other deciduous trees, has been surprisingly rapid. At the same time the finer spruces, firs, cryptomerias and other conifers have done quite as well as the deciduous trees.



Block of *Pinus Resinosa* at the Forestry Station Near Chico.



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E. J. WICKSON.....Horticultural Editor.

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## The Week.

August seems to be doing her worst with cool, gloomy days and nights along the coast, while in the interior warm days, followed by cool, damp nights, do not please either the threshers or the fruit driers. In southern sections particularly unseasonable storms of wind and rain have strayed from their place in the Arizona weather schedule into California territory. The water reaching the streams has been considerable in several instances, but California is better off without summer rains, and these visitants are not welcome. Fortunately, the greater area of the State has escaped them.

The strike continues to be troublesome, but some men are returning to work. There are indications that the apprehension of more serious times than we have had may not be realized. The American people can usually be trusted to return to its senses, no matter how far from them it strays, and the way employers and workmen have been knocked together this summer may do both classes good, but it does seem hard that the trouble so often comes just at the harvest season, when it does greatest possible injury to the agricultural producer. There should be a general law prescribing a closed season for strikers during the gathering and movement of staple crops.

There is little improvement this week. Spot wheat is steady and more doing. Futures sagged since our last report, but recovered. There has been no clearance this week except a small lot of wheat by steamer to Peru, but loading is beginning again at Port Costa, and over thirty ships are now here under charter for wheat and barley, and they will be quickly handled when the strikers get tired of doing nothing. Barley is steady. A steamer load has started for New York via Panama. Oats are firm. Filling Government contracts for 4000 tons for Manila has stiffened the market. Corn is out of reach; nearly all that formerly here has gone to Mexico, and this year's prices in the Central West will cause little to be used here. Beans are firm without change, but stocks are too light to actuate much business. All millstuffs are scarce and strong. Hay is unchanged; the small arrivals only serve for present use. Railways refuse large shipments through inability to handle them at this end. Beef and mutton are quiet and steady; lamb is easier, for lamb has about reached sheep's estate; hogs are the same as last week but the market is only just steady. The receipts are fair for present requirements and very little packing is being done. Butter has been advanced again and the receipts are

still decreasing. Cheese is steady. Eggs have risen once more. There are fewer Eastern eggs arriving, as the market at their home points is higher. Good poultry is in fair demand and prices, but there is too much poor old stock. Eastern poultry is also arriving less freely. Potatoes are decidedly scant, not enough to fill orders. Common river potatoes, which sometimes go in a glut at 25c per sack, have brought seven times that for Eastern shipment. This is a great year for the river farmers: they ought to be coining money. Choice fruits are firm all around. Pears are in active request and cling peaches are at their old tricks. There has been a sale to a fruit crystallizer as high as \$55 per ton. Lemons are easier as limes are cheap and the weather too cool for soft drinks. Valencia Late oranges are still in and selling in small quantity at fair rates. Dried fruits are strong and active; apples are higher, apricots above quotations, pears are wanted, and the whole line is strong. The almond situation looks well, as it is said that the large advance purchases made last week have already been placed, and buyers' appetites may improve for other offerings. Walnuts are talked of at 8½c for new-crop softshell; but, at the same time, the remnant of the last crop is bringing 14c. The Association's views are yet to be heard. Dealers are talking down the coming hop crop to 10c, on the ground of foreign crops, etc.; but growers think 15c looks better; so the two are wide apart. Wool is in good demand and firm.

The injunction against the Cured Fruit Association has been dissolved so quickly that the plaintiff may rub his eyes and wonder whether he ever had one. The fact suggests one advantage of association by growers, viz., that the courts can be accelerated. If this had been a matter merely of individual concern, the court might have taken it up after he returned from his Christmas vacation; but when an association is interested, the law works like lightning. That is a good thing to remember. Judge Seawell of San Francisco went to San Jose, heard the injunction suit and rendered his decision Monday, dissolving the temporary injunction. The Association let a contract and began work on the construction of a packing-house at Santa Clara to hold 18,000,000 pounds of prunes. The plaintiff, a member of the Association, began injunction proceedings against the directors to stop the building of the packing-house. He alleged that the directors had no right to build it and that they were exceeding their powers. The answer waived all questions of law and went to the direct issue. Judge Seawell holds that the Association has the right to build packing-houses. Plaintiff is given leave to file an amended complaint if he can show an improper use of funds; but being so quickly thrown out of court by a judge who waives all things but direct issues, it is doubtful if he will care to get in the orbit of such a legal buzz saw again.

The law in Fresno also seems to be running in favor of the organized fruit growers, although it has not the speed which was reached at San Jose. On Monday Justice Austin rendered judgment in favor of the raisin combine against Seropian Bros. for the delivery of 297,450 pounds of raisins of the unsold and left-over crop of 1900, and in case delivery cannot be had, then that they pay the value thereof—\$9038.76—with \$217.88 damages for retention. By reason of like refusals by other raisin men to deliver up unsold and warehoused raisins of the packers' combine, to whom the Association sold the left-over crop in a lump lot, the recent raids were made on warehouses to recover raisins in Fresno and Madera counties, title to which was claimed by the combine under the contract with the growers. It evidently does not pay to trifle with these growers' combinations; they are loaded.

Readers should not overlook the announcement of the coming State Fair in our advertising columns. This is proving to be a year of much activity and interest, and in such a year the State Fair naturally attracts much attention. The interest in fine stock should take many purchasers to the Fair grounds, for we believe they will find plenty of good things. The California State Dairy Association will hold its annual convention at Sacramento during the Fair. This convention promises to be very largely attended, and a general discussion will be had during

its progress upon all subjects relating to dairy farming, including the handling of dairy products, their manufacture and the breeding and feeding of cattle. Many distinguished persons will be present, and all interested in dairy farming in any way should attend the convention and see the dairy exhibits at the Park and the Pavilion. The Fair will open September 2nd and continue two weeks.

Bovine tuberculosis is still cropping out in high places. The Hanford Journal tells of a Holstein bull which belonged to N. W. Motheral, and which was condemned by Dr. Hunter of Visalia, the veterinary inspector of the district, as having tuberculosis. The bull was killed at the Motheral farm and a post mortem examination was held by Dr. Twining, a bacteriological expert from Fresno, and Frank Griffith, the veterinary surgeon of Hanford. The lungs of the animal were found to be honeycombed with the germs of tuberculosis, and tubercular consumption had so far advanced that the animal was in a terrible state.

The citrus fruit shipments for the year are reaching the figures anticipated for them. From November 1, 1901, to July 31, 1901, the total was 23,155 carloads. Of these, 2463 carloads were lemons. For seven months of 1901 the shipments by months were: January, 2801; February, 3380; March, 4256; April, 4054; May, 2656; June, 1931; July, 1208. There were shipped from southern California on Saturday and Sunday seven carloads of oranges and nine of lemons. The total shipments for the season, November 1, 1900, to date, are 23,466 carloads, of which 2619 carloads were lemons. Prices, too, this year have been good, except when the trouble occurred for lack of cars. The citrus interest has rolled a lot of money into the State this year.

The American Tommy Atkins is a very conservative individual. It is less trouble to annex a whole archipelago than to change an item in the list of army supplies. For example, the War Department knows of something which they call Timothy hay. We used to know all about this Timothy back East, but we cut his acquaintance when we came to California. The army people are not so; they propose to stand by Timothy to the bitter end no matter in what part of the world they are, and as for hay—by any other name than Timothy it does not smell so sweet. The result is that army contractors are obliged to chase Timothy hay way up in the State of Washington and pay nearly twice as much for it as they could get fine cereal hay for in California. This American Tommy says our hay is nothing but straw and he calls loudly for his friend Timothy. The result is that though on a pinch the army bought last year 20,000 tons of California hay, which was shipped to the Orient, this year not a pound, it is said, is being taken, although this year this State has produced a larger and better hay crop than in many seasons past. Through advices from the north the fact is established that in June 6000 tons of Timothy hay were purchased in Seattle at \$21 a ton. This was loaded on the steamer Alcoa that had cleared from San Francisco with a partial cargo and completed her clearance from Seattle with Government contract hay. This hay is justly regarded as inferior in quality when compared to the California product, and at the price named, based on the ruling quotations, an excess of \$21,000 was paid by the department.

The old Grape Growers' Association retired from business, as prices were so high that grapes would take care of themselves; but wine makers are doing the combination act to keep themselves from paying too much for the fruit. In southern California the situation seems to be vexed by a limited purchase of wine grapes at \$25 per ton, and vineyardists do not like to talk about less than that; but wine makers think \$18 would suit them better. Under such circumstances, the growers ought to act together to find out what a fair price really is. In San Francisco there is an effort to fix grape prices, as described in our "Market Review" on another page.

The coming Fruit Growers' convention, under the auspices of the State Board of Horticulture, will be called in this city on Dec. 3 to 6. The last convention in this city was great in force and numbers and considerable in accomplishment, also. It is proposed to make this the most representative convention of fruit growers that has ever been held in the State.



QUERIES AND REPLIES.

Aleyrodes on Grape.

TO THE EDITOR:—You will find enclosed some grape vine leaves. Please inform me through the PACIFIC RURAL PRESS what is the matter with them. The leaves are covered with black spots that might be some kind of scale bug, but I cannot find any on the grapes or the stock of the vine. The leaves are very sticky, also the grapes, and the ground under the vine is black with that stuff dropping from the leaves. —A SUBSCRIBER, Ukiah.

The insect is not a scale, technically speaking, but it is as near a scale as can be and still miss it. It is an aleyrodes of a new species which Prof. Woodworth of the University, who has just returned from a year's study in the East and in Europe, will give attention to with reference to fixing its scientific standing. The aleyrodes were for a long time classed with the coccidæ or true scale insects, as the young forms are thoroughly scale-like, but mature insects are very unlike mature scales. Both male and female are only about  $\frac{1}{16}$  inch with wings spread, and each insect has two pairs of wings. The insects multiply with alarming rapidity. The leaves sent by our correspondent are thickly set with small black spots not unlike the conventional fly speck, and the ground is blackened with the smut which grows upon the honey dew which is freely exuded, covering the leaves and the ground below. The insects must be killed not only because of their draft upon the sap, but because the smut will destroy the market value of the fruit. Fortunately, they can be readily destroyed by kerosene emulsion, tobacco water, soap mixtures, etc., for they are not covered by a scale, but are readily reached with a spray applied to both sides of the leaves. The aleyrodes are a bad lot. Some of them are very injurious to citrus trees in Florida, and to exclude them the southern California authorities are now interdicting importations from Florida.

The Washington Navel.

TO THE EDITOR:—Do you think the Navel or seedless orange which you grow has been tried long enough to warrant a person planting them in feeling satisfied that he will have a seedless orange?—J. M. G., Havana, Cuba.

There can be no doubt about it. The variety was brought to California from Brazil a quarter of a century ago, and though it has developed a distinctive character under favoring California conditions it remains practically seedless. The variety comprises at present something like four-fifths of our commercial crop, and during the citrus year now closing perhaps 15,000 carloads have been sent to distant markets. This immense product from a district 500 miles in length, though chiefly from the south end of it, shows that under widely diverse latitudes the fruit remains the same. It has also been shown that the Navel orange is seedless even where it does not possess the characteristic excellence which it develops in California. In Florida it has been a disappointment. From this growers in other citrus regions should conclude that, though they may get our seedless orange, they may not secure other characteristics, apart from freedom from seeds, which make it so valuable in California. It may be a poorer orange in humid, semi-tropical regions everywhere. Though Navel oranges are known to have existed in the south of Europe hundreds of years ago, the peculiar mark did not claim the world's attention until it rested upon the apex of a California-grown fruit.

Fascination in the Apple.

TO THE EDITOR:—Will you kindly state what it is that causes knots or welts to grow on the limbs of apple trees in some instances, from which shoots grow out, only to form other welts; the fruit also forms in clusters. I have observed that this peculiarity is more common in the early variety. Is there any remedy for it?—JOHN MCGONIGLE, Ventura.

We have always taken this to be a form of fascination—a freaky growth, in the course of which tissues which normally would be extended are compacted into a short enlargement, sometimes flattened, as in the case of the cherry; sometimes rounded and thickened, as in the case of the apple and pear. We are not aware that such abnormal growths have ever been accounted for, though the occurrence is so common that the botanists have long had a name for it, and they say the branch has become fascinated. In

this process as many buds are formed as the mass of tissue would have were it normally extended. When it is a case of flattening, then these buds are arranged in series laterally on each side; if it is a roundish enlargement, the buds are in an irregular circle. In a small enlargement perhaps only one or two buds are seen, and then out from the lump will come a shoot in any direction. Evidently, some varieties are more disposed to such growth than others. No remedy is known. Our own practice is to cut all such knobs out in pruning, so as to force a new shoot from the first normal bud below it. Unless they are removed, the tree is apt to be all tangled up with mean, ineffective wood.

The Alligator Pear.

TO THE EDITOR:—Can you tell me where the alligator pear is raised, and if it will grow and do well in the adobe land in San Joaquin valley? If so, where can I get the trees?—AN OLD SUBSCRIBER, Stockton.

The tree is fruiting successfully along the southern coast from Santa Barbara southward. Probably most fruit is grown in Los Angeles county, and it sells well in Los Angeles city markets. Only experience can demonstrate its success or failure in the San Joaquin, and probably some reader will supply that information. The tree grows well on well cultivated adobe soil in Berkeley and has survived a temperature of about 25°, but no fruit has been borne—perhaps for lack of adequate summer heat. In the San Joaquin this would be present, but it would not be safe to plant many until evidence is had of its endurance of a lower temperature than occurs at Berkeley. The trees can be furnished by any of our leading nurserymen.

Potato Diggers.

TO THE EDITOR:—What potato digger is the best and where can I get it, also where is the digger a success? The people whom I have asked about potato diggers say the potato fork is the best.—A SUBSCRIBER, Cucamonga.

We cannot tell. Probably no digger is best for all conditions of soil and crop. We cannot decide between machines. It is the part of the seller to advertise them and of the intending purchaser to secure all possible facts from the advertisers and form his own conclusion on this evidence or by actual trial as to what best suits his conditions. We presume by far the most potatoes are dug with a fork, but that is not evidence that the machine diggers would not sometimes be better. It is an interesting subject. It looks this year as though good potatoes would pay well by all means of digging.

Chicken Ticks.

TO THE EDITOR:—I am sending you some bugs that killed a lot of a neighbor's chickens last year and are commencing on them this year. They get under the wings, etc., and suck the blood. Can you tell me what they are and suggest a remedy?—E. C. COBURN, Penryn.

The insects are ticks, similar to the ticks which attack quadrupeds. The best preventive is the occasional rubbing of grease under the chicken's wing. To rid chicken houses of these pests is very difficult, because they are so expert in hiding in cracks and crevices. If the house is close, or can be covered with a tent or canvas, all vermin can be killed by hydrocyanic acid gas, just as it is used for fumigating citrus fruit trees. Usually the houses are so open that burning sulphur in them, or other use of poisonous gases, accomplishes little. The insects can be killed with coal oil, but particular attention should be given to drenching all cracks, etc.

Codlin Moths Received.

TO THE EDITOR:—I send you two kinds of moths—caught in my Haseltine moth catcher last night and the night before. Would like to have you name them for me.—A. A. HENRY, Arroyo Grande.

The collection sent by our correspondent numbers seven moths, of which four are codlin moths. Of the conditions under which they were caught we know nothing.

Prune Splitting.

TO THE EDITOR:—I have read a statement in the Mercury that prune splitting was a fungus disease and could be crushed by fungicides. What is your idea of that proposition?—READER, San Jose.

The statement that prune splitting is due to a fungus disease does not agree at all with our knowledge

of the subject. There is a fungus which creeps in when the pulp is split; but treatment of that is of little account, because the fruit is already spoiled by the splitting. We do not know what it is that causes this splitting. It occurs with different fruits all along the line from cherries to oranges, and seems to be due either to some atmospheric condition or to some condition of the sap flow; but no demonstration has been had of the cause.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending August 19, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

High temperatures have continued during the week, and conditions have been favorable for farm work. Fruit picking and curing have progressed rapidly, and large shipments of fresh fruit have been made to Eastern markets. Grapes have been considerably injured by heat in some sections, while in others little damage has been done, owing to heavy foliage on the vines. In many places the grape crop will be light, as a result of too close pruning and late spring frosts. Hop picking is progressing, and an average crop of excellent quality is being gathered. Grain harvest is nearly completed; wheat and barley have yielded excellent crops. Sugar beet harvest continues. Corn and vegetables are doing well. Almond picking has commenced.

COAST AND BAY SECTIONS.

Warm days, cool nights and foggy mornings have continued during the week, and conditions have been favorable for all crops. Harvesting, threshing and hay baling are progressing. In some of the northern counties wheat and barley are reported light crops, but in the central and southern counties the yield is better, and nearly average in some places. Hops have made rapid growth and are in excellent condition; picking will begin soon. Beets, corn and potatoes are doing well. Fruit trees are in good condition. Grapes continue thrifty, and in some sections good crops will be gathered. The deciduous fruit crop in the Santa Clara valley is much below average, but most of the fruit is of good quality. Late fruits are ripening rapidly. Prunes are turning out better than expected in Sonoma county.

SAN JOAQUIN VALLEY.

Very warm and sultry weather prevailed during the week, the first portion being clear and the latter generally cloudy. Light sprinkles of rain fell Thursday night and Friday morning over a greater portion of the valley, but the precipitation was too light to cause any damage. The grain harvest is about completed in all sections and the yield and quality have been good. Deciduous fruits are ripening very fast and the canneries and dryers are in full operation. Large shipments of green fruit continue to Eastern markets and of melons to the northwest. The melon crop is large and of excellent quality. Sweet potatoes are making excellent progress, with indications of a large crop. Grapes are doing nicely; the earlier varieties are being marketed and some shipped to Eastern markets. Water continues plentiful, and stock of all kinds are in good condition. Farmers are busy preparing for fall work.

SOUTHERN CALIFORNIA.

Warm weather has continued during the week, with cool, foggy nights and mornings. Grapes are ripening rapidly and will yield a fair crop. There is a good crop of late peaches. Melons are plentiful and of excellent quality. Walnuts are looking well, and are said to be past danger; the yield will be about the same as last year. Citrus fruits are in good condition. Large shipments of lemons are being made from San Diego. There is a large yield of honey, superior in quality. Barley is poor in quality, but a fair yield. Sugar beets and vegetables are doing well.

EUREKA SUMMARY.—Heavy fogs were beneficial for all crops near coast, but high temperatures continue in the interior. Fruit is ripening rapidly. Rain is much needed. Oat threshing in progress; an average crop is practically assured.

LOS ANGELES SUMMARY.—Frequent rain, with thunderstorms and occasional hail, occurred in the mountain sections. Considerable damage in Redlands district to orchards, fruits and flumes. Harvesting peaches, plums and pears; crop generally light, quality good.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, August 21, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week	Total Seasonal Rainfall to Date	Total Seasonal Rainfall Last Year to Same Date	Average Seasonal Rainfall to Date	Maximum Temperature for the Week	Minimum Temperature for the Week
Eureka.....	.00	.03	T	.21	58	48
Red Bluff.....	.00	T	.05	.04	100	60
Sacramento.....	.00	T	T	.02	92	52
San Francisco.....	.00	T	T	.02	62	50
Fresno.....	T	T	T	.04	104	54
Independence.....	.12	.33	.08	.05	88	58
San Luis Obispo.....	.00	.18	T	.03	86	54
Los Angeles.....	.00	.08	T	.04	82	58
San Diego.....	.00	T	T	.05	72	64
Yuma.....	.14	.22	.02	.43	106	7

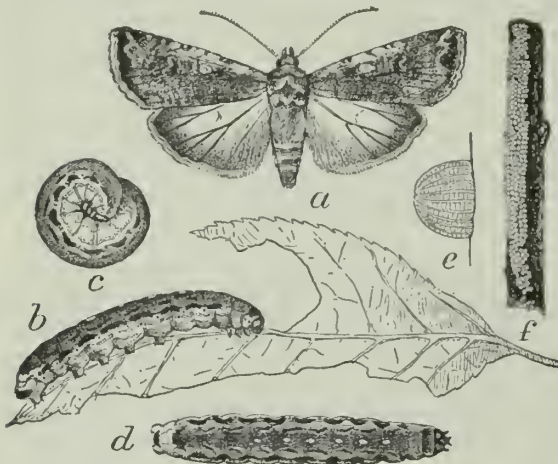


## ENTOMOLOGICAL.

## Remedies for Cutworms.

California suffers from cutworms in their season and though they are not just now at their work it is a good time to get rid of them. We doubt if our State has as much trouble with these pests as has the State of Washington, and yet we have too many for the comfort and profit of some plants, and we can learn from Washington about them. The last bulletin from the Experiment Station at Pullman is by R. W. Doane and D. A. Brodie, and deals ably with cutworms from all points of view. We count the review of remedies most suggestive for us, and we present that part of the bulletin, reproducing the pictures which show both the disastrous work of the insects and the ways to check them up.

**REMEDIES.**—So much has been written and said about the various methods of combating cutworms, and so many "sure cure" remedies have been found upon another trial to be of little avail, that the whole subject seems to be a mass of conflicting statements. This may be explained, first, by the fact that many of the so-called "successful remedies" have been applied just at a time when the worms were disappearing anyway, and so appeared to be successful, when, in fact, they were of no use whatever, as subsequent experiments proved; second, the remedies to be used vary so much with the conditions that no single remedy can be given that will prove equally successful at all times and places. Our energies must be directed toward fighting this insect in the larval stage, for we as yet know of no successful way of combating it in any of the other stages. It is well known that the



Cutworm Moth, Eggs and Full Grown Worms.

adults are attracted to lights, and trapping by differently constructed lantern traps is resorted to, but the same amount of time and energy spent in combating the insect in other ways would probably be of much more value. Besides this, hundreds of beneficial insects are destroyed in these traps, and quite frequently the harm done in this way overbalances the good.

**CLEAN CULTIVATION.**—Experience has shown that an orchard or a garden free from weeds and rubbish is not a good breeding ground for cutworms or other insects. One of the most important items for the orchardist or gardener to observe, then, is clean cultivation, for not only will his premises thus become uninviting as a breeding place for noxious insects, but he will be able more easily to control any pests that do find their way to his trees or plants.

**DITCHING.**—It is a well-known fact that the onward march of the army worm can at times be stopped by digging a ditch or trench, with perpendicular walls, in the line of their march. During this last season's outbreak the variegated cutworm assumed the army worm habit of marching in great numbers from one field to another, and was thought by many to be the true army worm. This led some to resort to the system of ditching, with very satisfactory results. If a field was still uninfested, a ditch 10 to 12 inches wide and about as deep was dug around it, or it was often found just as effective to dig the ditch only on the side from which the attack was threatened. Often a deep furrow was plowed with the perpendicular wall next the field, and served the purpose admirably. It sometimes happened that only a small portion of a field or orchard was infested at first. In many such instances the pest was kept from spreading by ditching around the infested area, thus restricting the injury to a small portion of the field and making it much easier to combat it. The practice of digging holes at intervals of 8 or 10 feet along the bottom of the ditch was also resorted to, and thousands of worms were destroyed by falling into these.

**BANDING THE TREES.**—Many different schemes for preventing the worm from climbing trees were tried with more or less success. In many instances a band of tar or pitch was painted around the tree, and was effective for a short while, but it soon became dry, and if a fresh coat was not applied every few days



A potato field; the two middle rows received two applications of Bordeaux mixture and were not attacked, while the others, including those receiving only one application, are eaten to the ground.



A turnip field showing the effect of ditching; the portion of the field protected by the ditch was not affected, the rest was wholly destroyed.



Turnip field showing the effect of cutworms. In the foreground are a few turnips showing how the worms ate out the inside.



the worms soon began crawling over it. It must be remembered, also, that this practice is somewhat dangerous to the trees, as many young trees have been killed in this way. In a few instances fly paper was tied around the trunk of the tree and served the purpose admirably until it became covered with dust or dirt. Strips of tin tied closely around the tree did not seem to be very effective, as some worms usually got by them, either through crevices where the tin did not fit close to the tree or along the seam where the tin lapped. Cone-shaped paper collars made out of rather stiff paper were tried in many places, and where care was taken in putting these on they were very successful. The paper was tied close around the tree a short distance above the ground, with the lower edge standing out from the tree for some distance, thus forming a cone. The principal difficulty comes in getting these to fit close around the tree, and in getting the edges of the paper fastened close enough where they fold over each other.

In many places in the East orchardists are using a band made of cotton batting. So successful has this plan proved that it is now used in many places to the exclusion of other methods for protecting the trees from the attacks of climbing cutworms. The original plan was simply to tie a narrow band of cotton batting around the tree with a twine string. This acted as an effective barrier against the worms until it became wet, when it seemed to lose its usefulness. To overcome this difficulty the following plan was adopted: Thin sheets of the batting were cut into strips 4 or 5 inches wide and long enough to reach around the tree. After being wrapped around

to be particularly diligent in seeking out the larvae and pupae.

Several fields that came under our notice were visited daily by large flocks of crows, and were thus kept almost entirely free from cutworms.

**DESTRUCTION OF CUTWORMS WITH PARIS GREEN AND OTHER ARSENICAL POISONS.**—Experiments made during the past season seem to confirm the results often obtained before while experimenting with Paris green on cutworms, namely, that as ordinarily used it is of little or no value. At least the results obtained do not seem to warrant the outlay. Used as a spray in the usual strength, it was not found at all effective on hops, fruit trees, berries and many kinds of vegetables upon which we saw it tried. While many of the worms were doubtless destroyed, they were not killed quickly enough to save the trees or plants. Using the Paris green dry, mixed with lime or flour, met with no better success. Poisoned baits consisting of bunches of weeds, grass or clover that had been dipped in a strong Paris green mixture met with better success, and thousands of worms were destroyed in this way.

Many experimenters have found that a poisoned bran mash has been very successful in killing cutworms. It is made by taking one part of Paris green or white arsenic to twenty-five or thirty parts of bran and adding enough water to form a mash sufficiently soft to be dipped out with a spoon without dripping. This is placed around in infested areas where the cutworms will easily find it. It is said that they eat it greedily, and are soon killed by it. This is a simple remedy and well worth trying. It is especially valuable for destroying the worms in in-



Hop yard defoliated by the cutworms, August, 1900.

the tree it is tied at the bottom instead of at the top. After the bottom is carefully tied the top of the band is rolled down over the bottom edge, and, of course, stands out somewhat from the tree, thus forming a sort of funnel or cone-shaped mass of cotton batting. It is claimed for these bands that they are very effective for a whole season, as they soon become dry and fluffy after being wet by a rain. Some orchardists use a band of wool, as the rain has little or no effect on it, so that it protects all the time, whatever the weather may be. With slight modification these cotton collars could be adapted to protect hops also.

**PROTECTING SMALL PLANTS.**—Cabbages, tomatoes and similar garden plants which are very liable to be cut by the cutworms very close to the ground may often be protected by wrapping pieces of smooth, stiff paper around the stem, or by placing tin cylinders, such as fruit cans, with both ends removed, around the plants.

**SPRAYING WITH BORDEAUX.**—At Puyallup it was observed that potato vines that had been sprayed with Bordeaux mixture for blight were entirely left alone by the cutworms, while all the unsprayed vines in the same patch were completely eaten down. The Bordeaux was also tried on asparagus, with like results. This is, indeed, encouraging, for if further experiments should prove that the cutworms will not attack any plant that is sprayed with the Bordeaux mixture it will be a very easy matter to combat this pest.

**POULTRY IN THE GARDENS.**—During the recent outbreak it was very noticeable that in gardens and fields where chickens, turkeys and other poultry were kept the cutworm did much less damage. In fact, many gardens were kept entirely free from the pest by this means. Turkeys and guinea hens seem

to be particularly diligent in seeking out the larvae and pupae.

**HAND PICKING.**—In many instances this good old-fashioned remedy is the very best one to resort to. It frequently happens that this is the only practical and efficient remedy. The principal objection to it is, of course, that it takes too much time. Last summer we saw two men at work with a spraying outfit in a small field of asparagus. They stopped at every plant and thoroughly drenched the whole plant and every worm on it. In looking over a part of the field they had sprayed some hours before, we found the worms almost covered with the Paris green, but still feeding. It required but a few minutes to demonstrate that it would take less time to shake or brush the worms from each plant and destroy them than it did to do the spraying, as they were doing it. In the one case the work was effective, in the other ineffective.

Very often the cutworms are found hidden away in numbers under boards, etc., that may be lying in the field. If such places are examined from time to time many of the pests may easily be destroyed.

## HORTICULTURE.

### The Pomelo in California.

Recurring to the subject of pomelo growing in California, on which we hazarded a brief comment in our last issue, the following paragraphs are prepared by A. P. Griffith of Azusa for the Covina Farmers' Institute. Mr. Griffith clings to the hope of profit in the pomelo and we are glad to have his views.

**TASTE FOR THE POMELO.**—The pomelo is better ap-

preciated in California than in the East. That is to say, while fashion decrees it shall be eaten for breakfast in the early months of the year, taste here waits until it is ripe before consuming.

The pomelo committee—appointed at Riverside last December—reflected the Eastern market when it said that certain varieties which did not size up to the standard of the Eastern demand were "not recommended for market." In other words, "We do not recommend the growth of these varieties for market because the market will not pay remunerative prices for them." The market is wrong; but that is poor comfort to the grower whose returns are in red.

**VARIETIES.**—The proper description of this fruit would be: Some varieties produce normally large and some small fruit. Some mature earlier than others, but nearly all varieties produce a delicious fruit for the table or for a very refreshing drink. The tonic quality seems very beneficial to a run-down system. Fruit is at its best from May to August.

**COST AND SALE.**—Now, if this description is true, why is our fruit going to waste? Simply because the price at which it is sold in the East at retail is simply prohibitive to the mass of fruit consumers.

Dealers pay us on the markets of the East 2 or 3 cents each and hold them for sale at 10 to 25 cents. They necessarily have a limited sale; while if the fruit were pushed at a fairly liberal advance the sales would be greatly increased and the profits accordingly enhanced.

Three dollars per box, delivered, would allow us a fair price and enable the dealer to dispose of the fruit at from 5 cents for 126s to 150s to 20 cents for 48s, 64s and 80s. Would not this be more profitable all around?

It is a great mistake to suppose that small fruit is either not good or not profitable from an economic standpoint. I question whether there is not more available fruit in a box of 126s to 150s than in a box of the larger sizes. Of course, I am referring to ripe fruit.

**POMELADE.**—Mrs. George W. Taylor has produced a magnificent jelly or marmalade from the pomelo and this is her receipt:

"Take four good-sized pomelos; slice them thin, skin and all; remove the seeds, weigh and add a quart of cold water to a pound of fruit; let this stand twenty-four hours; then boil twenty minutes or until the skin is tender; let stand again for thirty-four hours; weigh, and for every pound add one pound of granulated sugar and boil until it jellies. Will make about ten glasses. If syrupy, consider it a failure."

A delicious drink is made by rasping out the juice and pulp of a ripe pomelo with a juice extractor (glass) and adding one to two teaspoonfuls of sugar and ice.

With these recipes known and appreciated, our fruit should not be allowed to waste. A peculiarity of the pomelo is that dropped fruit, if picked up before decay sets in, is at its best as a juice producer.

At the close of Mr. Griffith's remarks several large buckets of pomelade were brought forward and the audience was treated to a taste of this delicious drink, which fully sustained all that had been said of it by the speaker. It was composed of the juice of the pomelo, with only sugar and ice added.

### Small Fruits on a Small Scale.

E. J. Taliaferro has a small ranch of half an acre in the foothills of Sacramento county, and what he does with it is fairly startling: The Bee says during the present year Mr. Taliaferro has received \$700 from sales of vines and berries from a berry patch not exceeding half an acre in extent. No, there is no mistake about the figures or the measurement. He has just one acre of land, and on this is his house and little flower garden, fifty fruit trees in orchard form and an alfalfa patch. The remainder is in berries.

Mr. Taliaferro was willing to give the facts and showed the newspaper man over his little horticultural gold mine, and explained the merits of the different kinds of berries. He pointed out that better results could have been realized had he been able to give more time to his place; better cultivation here and there, etc. But as a whole the place has been well kept, and much work has been done in terracing the steep hillside to make irrigation convenient, and to prevent the sandy soil from washing. Most of the cultivating has been done by hand.

An acre seems a small bit of land when one reads about it, but in going over the Taliaferro place one finds a good deal of walking, up and down the rows of berry bushes and in and out of the half-acre orchard, where peach, almond and other trees are bearing heavily.

Good quality has no doubt helped Mr. Taliaferro to get good prices for his berries this season, but it is the yield, he says, that, more than anything else, accounts for his success. He has sold his berries to a single dealer in Sacramento.

**CULTURE.**—"I use plenty of manure," said the berry grower, as he led the way through the rows of



berry bushes. "That has much to do with getting large crops. And water is another need; especially for strawberries. I have strawberries, raspberries, Loganberries, Phenomenal berries, Primus, Japanese wine berries, blackberries and some other kinds. It keeps the whole family busy to pick and handle the crop.

**VARIETIES.**—"I have more Phenomenal than any other berry. It is one of the best to grow for market purposes. Here are a few ripe ones, though the crop of the present season is about all picked. As you see, it is a very large and handsome berry, two or three times as big as the Logan, although that is large. The Phenomenal was originated by Luther Burbank a few years ago, and he sold the first vine for \$1000. Now it is pretty well distributed over the country, though most people have never even seen the berry. It is a cross between the red raspberry and the blackberry, and grows about 1½ inch long, of a dark, rich color, something like the Logan, but it is a much better tasting fruit, as you will notice. This is a berry that stands shipment well, and I would not be surprised to find it going a long way East under refrigeration. It is very fine for jams and jellies—much better than the common raspberry, I think.

"The Primus, which was also originated by Burbank, is my favorite table berry, but it is too soft to be carried far. People living within a few miles of a good market should make money growing it. It is a cross between the blackberry and the black raspberry, larger and rounder than the Logan, and fine for jam or any form of cooking. In my judgment it is a better table berry than any other, and its softness is the only thing against it.

"The Japanese wine berry, as you see, looks like the raspberry, and is good for the table or for cooking. It grows in clusters, and is easily shaken from the bushes when ripe.

"For general planting for market purposes, I recommend the Phenomenal. Its large size and handsome appearance make it sell well, and it does not disappoint the palate. The vines are hardy and yield well, and the size of the berry makes picking rapid and cheap. I have more Phenomenal than any other kind of berry. You notice that the vines are large and vigorous, and free from such thorns as are a great annoyance with many vines. The Phenomenal is practically seedless, which is a good point. There is nothing better for yield. Last season from two Phenomenal vines two years old I sold berries to the value of \$5.10, at an average of \$1.15 a crate of sixteen boxes of the ordinary size used for raspberries, each supposed to hold a pound. The lowest price paid me for Phenomenals this season was \$1 a crate of sixteen boxes.

"Now I will show you," said Mr. Taliaferro, pointing to a heavily laden bush, "an Eric blackberry vine from which I took last season, in two pickings, twelve quarts of berries, besides some fruit that was not counted. It's a good berry, and, like all the other fruit up here, is well flavored."

Last year, when he had fewer vines bearing, his cash receipts for berries were \$240, and for berry vines \$120. His only outlay for labor was \$10, all the work being done by himself and family. So his net return from half an acre or less was \$350, and this year his gross return has already doubled that sum, with more berries to hear from.

## THE IRRIGATOR.

### Census Report on Irrigation in Arizona.

The census of 1900 was planned to include statistics on irrigation, and the results of this special inquiry are now becoming available. The first main division of the irrigated area to come under the compilers' hands is Arizona, and the results are given in Census Bulletin 68 by L. G. Powers, chief statistician for agriculture. The conclusions are summarized in the following statements:

**IRRIGATION HISTORY.**—Arizona has been inhabited at different times by three races, each making use of irrigation in agricultural operations. Of the first, or prehistoric, very little is known. Evidences abound that it inhabited Arizona for an extended period, and had vanished before the advent of the white man in America. In Maricopa and other counties are found traces of this race, and the present canals and ditches for irrigation in many places follow closely the lines laid down centuries ago. When the region was explored by white men the agricultural Indians were practicing irrigation of a primitive kind, very much as do their present successors. The white settlers have improved on these methods, and population, agricultural development and wealth have advanced on lines parallel with the artificial application of water to the cultivation of the soil.

**IRRIGATED LANDS.**—Of the 72,268,800 acres of land surface of Arizona, only 1,935,327, or 2.7%, are included in farms in 1900, and only 254,521, or 0.35%, are improved. Of the improved land, 227,890 acres are located outside of the Indian reservations. The importance of irrigation is demonstrated by the fact that irrigated land outside of the Indian reservations has an acreage of 185,396, or 81.4% of the corre-

sponding improved land. The progress of agriculture during the decade ending with 1900 is attributable to the successful application of irrigation to the growing of hay and forage, cereals, vegetables, fruits and other crops.

Within the ten years from 1890 to 1900, 545 miles of canals and ditches were constructed, at a cost of \$1,508,469. Out of this total, \$512,000 was expended in ditches into which no water had been turned before June 1, 1900. Aside from this amount, \$250,000 is represented in canals which were completed within the last few years, and which utilize only a small quantity of the water appropriated for them. The acreage under these ditches, which in the near future will be brought under cultivation, will undoubtedly be much larger than the area now irrigated by all the ditches constructed since 1889. In 1890 the acres irrigated, outside of the reservations, numbered 65,821; in 1900 they numbered 185,396. By the opening of new ditches and canals between 1890 and 1900, 25,297 acres were added to the irrigated area. By the enlargement of the canals previously constructed, and as the result of more intelligent methods of water distribution, 93,278 acres were added to the productive area of the Territory. The total increase in irrigated land in ten years was 119,575 acres. Most of this land was public domain in 1890.

At a low estimate its present average value is \$30 per acre, or \$3,587,250. Irrigation has added this large amount to the farm wealth of the Territory. The total number of acres of irrigated crops is 137,233, while the total number of acres of land irrigated is 185,396. The difference of 48,163 acres represents approximately the area of pasture land irrigated. It is probable that a portion of the area upon which crops were reported as grown without irrigation was really irrigated at some time during the year.

**IRRIGATED FARMS.**—The number of farms outside of Indian reservations increased in ten years 183.3%; the irrigators, 177.3%; and the irrigated area, 181.7%.

Of the farms, 73.9% are irrigated, while of improved land 81.4% is irrigated. The average number of acres of improved land in each irrigated farm is 76, of which 62 are irrigated.

**PUMPING.**—In addition to surface water obtained from rivers, Arizona possesses considerable quantities of ground water, or so-called underflow, at depths varying from 40 to 1500 feet. Seventy-seven farms were wholly or in part supplied by this ground water by pumping from wells. In this way 974 acres were irrigated. The use of wells to augment the supply of water in the ditches, or by pumping the water directly upon the land, is becoming more general each year, and in sections where an artesian supply is abundant a considerable area of land above the line of ditch ultimately will be reclaimed and rendered productive and valuable.

**COST AND CAPACITY OF DITCHES.**—No reports were secured concerning the cost of irrigation ditches in the Indian reservations. The number of acres of irrigated land for each mile of ditch reported averages 124. The number of acres under ditch for each mile is 591, or nearly five times the present irrigated areas. The ditches furnished with sufficient water supply, properly administered, are therefore able to increase the cultivable area in nearly that proportion. The average cost of constructing the ditches was about \$2954 per mile, \$5 per acre of land under ditch, and \$24 per acre for the land actually irrigated in the year 1899. In explanation of the high average of \$24 per acre for all land irrigated in 1899, mention should be made of a number of facts. Some of the ditches were not completed sufficiently early in 1899 to deliver water to aid in maturing crops for that year. From others no adequate returns have been received for the large sums spent in their construction, because of lack of water supply. Not all the investments in irrigation ditches have been profitable, and not all have been wisely made. The disappointments which have followed many notable attempts to reclaim large areas of arid land have nearly always been due to the failure on the part of those concerned to give proper consideration to the subject of water supply. Such failures are reflected in the high average cost of irrigation canals per acre of irrigated land, and the average is made to appear much greater than it actually is, by including ditches not completed and delivering water in 1899. For ditches wisely planned and economically constructed, the average cost per irrigated acre does not vary much from the average cost of water rights, \$9.50.

**LAND VALUES.**—The average value of arable land under ditch, but not yet prepared for irrigation, is \$7.73 per acre, while that of good irrigated land is \$43.50. The difference, \$37.77, is the average value per acre added by irrigation. There has been a large profit over the cost of ditch construction—\$24 per irrigated acre. This profit would have been much larger and the cost per irrigated acre materially less if the ditches had been constructed only after due consideration of the factors involved.

Of the 5809 farms in the territory, including those in the Indian reservations, 4210 are irrigated and 1599 are unirrigated. The acres in the irrigated farms number 558,821; in the unirrigated, 1,376,506. The value of all land in the irrigated farms, not including buildings, is \$9,614,352, and of the unirri-

gated, it is \$1,801,108. The value of all buildings on irrigated farms is \$1,802,322, and for the unirrigated, \$444,178. Live stock on the irrigated farms has a value of \$8,500,067, and on unirrigated \$6,958,650. The irrigated farms are 72.5% of all; the corresponding percentage of acres is 28.9; that of the value of land and improvements, exclusive of buildings, 84.2; buildings, 80.4; implements and machinery, 85.7; live stock, 55; and the total of all these forms of farm wealth, 69%.

The average size of all farms, exclusive of holdings by Indians, is 468 acres; the average size of irrigated farms is 175 acres and the average amount of irrigated land on each irrigated farm is 62 acres. On the farms making use of irrigation the average value of products not fed to live stock is \$7 per acre. The unirrigated farms make greater use of the public domain for grazing purposes than do those which are irrigated, and from that source secure an income not directly obtained from the land inclosed in farms. Nevertheless, the average value per acre of products not fed to live stock on unirrigated farms in 1899 is only \$1.79.

In the counties outside of the Indian reservations the average value per acre of land, exclusive of buildings, is, for all farms, \$5.74, for unirrigated farms \$1.23 and for irrigated farms \$17.67. The average value of irrigated land per acre is \$43.50, while that for the best irrigated land, suitable for growing alfalfa, is from \$60 to \$200 per acre. Irrigated fruit land is even more valuable.

**WATER SUPPLY.**—There are relatively but two river systems—the Colorado and the Gila. The drainage area of the former and its tributaries, the Rio de Chelly, Little Colorado, Cataract creek and Bill Williams Fork, comprises about one-half the Territory. The other half, far more important, agriculturally considered, is embraced by the Gila, with its numerous confluent, each of which is of sufficient prominence to deserve consideration as a separate system, possessing an independent, though tributary, watershed of its own. These tributary members are the upper Gila watershed, the San Pedro and Santa Cruz watersheds, the Verde, Salt, Agua Fria, Hasayampa and Lower Gila. Within this area the agricultural wealth of Cochise, Gila, Graham, Maricopa, Pima, Pinal, Yavapai and Yuma counties is practically embraced.

Flowing in deeply eroded canyons through regions mainly of high plateaus, the Colorado and its branches are rarely available for irrigation purposes except in the southern portions of its watershed, where narrow valleys and basins are found. A review of the progress of irrigation is therefore confined very largely to the watershed of the Gila, wherein the greatest agricultural development has been shown. The region tributary thereto lends itself much more readily and cheaply to the construction of canals and ditches, and comprises far more available land which will ultimately be reclaimed than the drainage area of the Colorado and its affluents. Within this area lie the principal irrigated portions of Arizona, and in it are found the largest and most important irrigation systems. This section of Arizona resembles southern California more closely than it does any other portion of the United States. In many essentials it is not unlike certain districts on the southern and western shores of the Mediterranean, where irrigation is older than the history of the race which now inhabits it. Without irrigation, this part of Arizona is a semi-tropical desert; with irrigation, it is capable of sustaining a dense population, limited only by the water supply that can be secured by ditches, reservoirs and wells, and by the wisdom shown in the distribution of water thus obtained.

The development of the Territory by reclaiming its arid but fertile land presents problems of water storage of great importance. Their solution is simplified by the fact that the small precipitation of rain takes place during two plainly marked rainy seasons. In winter the rains begin to fall in December, and the precipitation, while not great, is quite sufficient to cause floods in the streams. The summer rains fall in July, August, and throughout September, and their amount and intensity are considerably in excess of those falling in winter.

While no reservoirs of importance have yet been constructed in the Territory, the future reclamation of large areas of fertile lands depends upon the storage of flood waters on the sites which nature has provided. When perfected, these reservoirs should be sufficiently extensive to provide water that will last through temporary droughts. They must be provided with enormous wasteways to safely discharge the torrential rainfalls which are not uncommon.

**THIRTY** tons of dynamite exploded in one blast, but in many separate charges, through two acres of Arch rock, an obstruction to navigation in San Francisco harbor, produced comparatively little earth-shaking effect at a distance. This was probably due to the distribution in many charges. The interference of the small earth waves coming simultaneously from many adjacent points dissipated instead of cumulating their effect. The blast was successful in removing the obstruction.

**THE** seasoned wood of the blue gum (eucalyptus) has been discovered to make excellent insulating pins for electrical work.



## Agricultural Review.

### ALAMEDA.

**FRUIT DRYING NEARLY COMPLETED.**—Niles Herald: The local driers have completed the drying of apricots and are nearly through with peaches and plums. Prunes are coming in and dipping is well under way. The yield locally is good and the fruit is much larger than last season. Buyers are in the field for apricots and pay 7½@10c., according to size and condition of the fruit. Most of the local prunes will be sold outside of the Association this year, from present indications.

**FIRST BEET SHIPMENT.**—Niles Herald: The first sugar beets of the season passed through Niles from Pleasanton on Monday, en route to the Alameda Sugar Works at Alvarado. The shipment consisted of eight carloads, and from now on until the close of the season shipping will continue. The sugar works force is busily engaged getting in shape for the run. A heavy crop is anticipated, with a good percentage of sugar.

### BUTTE.

**NEW OLIVE MILL.**—Oroville Register: The Ehman Olive Co. are now at work erecting an addition to their large pickling plant, which will be used for an olive mill. The building is 44 feet wide and 60 feet long. This will give them additional room for the pickling of olives and also for making olive oil. The Ehman Co. have taken up the olive industry here very extensively and find a ready market for the pickled olives. They will use the small and inferior fruit for oil, reserving the larger olives for pickles.

**BANANA TREE IN BLOOM.**—Four Corners: At the rear of the Farmers' Bank building there is a genuine banana tree, which is in bloom and which will bear its first fruit this season. From the stem of the tree hangs a large bunch of bananas, which are rapidly developing under the warm rays of the sun. The fruit is now about as large as one's fingers. The bulb of the tree was planted by William Lumbard in May, 1899, a little over two years ago.

### CONTRA COSTA.

**THE ALMOND CROP.**—Antioch Ledger: It is almost impossible to estimate the number of pounds of almonds that will be picked in this end of the county this season. On Saturday the Contra Costa Almond Growers' Association will receive sealed bids on about 135,000 pounds of various varieties. The above figures do not represent the entire crop of eastern Contra Costa county by any means. There are many almond growers in this district who have not as yet become members of the Association, and who will have excellent crops. Richard Trembath picked \$6 worth of nuts from one tree this season of the I X L variety, based on last year's price.

**ANTIOCH, Aug. 19.**—At a meeting of the Contra Costa Almond Growers' Association, held on the 17th, there were only two San Francisco buyers present to bid for the entire crop of about seventy tons. The bids were so far below expectations that they were rejected, and Saturday, Aug. 31st, was set as the date to try again. The members of the Association believe the San Francisco buyers put up a "job," and are making an effort to break up the Association. In consequence, no better bids are expected from local buyers, but it is hoped there will be bids from Eastern men. Should this not happen, and bids still be below what the Association deems fair, it will send an agent East to dispose of the crop. Saturday's meeting was largely attended and the sentiment among the growers unanimously with the Association. The best bid was from Armsby & Co., and was about 1 cent per pound lower than the firm paid for the Davisville crop about two weeks ago, and 2 cents less than the Association received last year, when there was three times as large a crop.

### HUMBOLDT.

**SHORT CLOVER CROP.**—Arcata Union: Owing to the clover crop on Arcata bottom being unusually short this season, the Arcata Creamery No. 2 has ceased to make butter, but separates the cream and sends it to Creamery No. 1 for manufacture. A ride over the bottom would surprise any one who has heretofore observed the fine, green fields of clover on the dairy farms. In many places the clover fields are bare and dry. Grain, beets and other vegetables, however, are looking fine, and there is no sign of rust, potato blight or worms, which is a pleasant condition not enjoyed by the farmers for some years past. Hay is about all down and cured.

### LAKE.

**STOCKMEN'S TROUBLES.**—Lakeview Examiner: It is reported that another big lot of sheep, numbering nearly 200,000

head, from Montana, are pointed towards Lake county, and are bound for the California market. It is thought they will pass through the eastern portion of the county. All that is necessary now to complete the devastation of the range in this county is for another large band to go through the center, as the band of 40,000 spoken of two weeks ago is already eating off the ranges on the western border.

### LOS ANGELES.

**JESS-HARVEY RANCH SOLD FOR \$30,000.**—Pomona Progress: The 37-acre orange ranch, known as the Jess & Harvey place, is now the property of Joseph J. Thomas, a capitalist from Crowley, La., he having purchased it last week from Stoddard Jess and James Harvey for \$30,000. The ranch is between Orange Grove and Town avenues and Ammons street runs through the center of it. It has for years been one of the show places of the valley, great care having been used to make it an excellent piece of orange land.

### MENDOCINO.

**ANGORA GOATS PROVE PROFITABLE.**—Sonoma County Farmer: J. C. and M. J. Hobson of Healdsburg have on their Mendocino county range, besides sheep, hogs and cattle, a herd of 750 head of fine blood Angora goats. They have just sold two carloads of goats to Ernest Humbert of Corning, Iowa, which started East a few days since over the Central Pacific Railway in two 36-foot double-decked cars. In the East there is a very large demand for goats and they bring high prices. Messrs. Hobson's goats are of very high breed, good shearers and of large size. Twenty-two of this band sold to a wholesale butcher in San Francisco, and weighed in Cloverdale after a drive of 25 miles, weighed on an average 118 pounds per head. The flesh of the Angora is of a much more delicate flavor than that of venison and mutton, the wild flavor being imparted to the flesh of the animal through their browsing habit, which flavor has earned for the meat of the Angora the popular name of Angora venison.

### SAN BERNARDINO.

**CITRUS FRUIT ASSOCIATION.**—San Bernardino Sun: Articles of incorporation of the Etiwanda Citrus Fruit Association have been filed in the county clerk's office. The company is incorporated for a term of fifty years and it proposes to carry on a general brokerage business and to handle citrus fruits in and around Etiwanda. The directors of the company are: George Frost, W. E. E. Layton, Henry Wilson, C. N. Ross and R. L. Louthian, all residents of Etiwanda.

### SAN DIEGO.

**SORGHUM DOING WELL.**—Imperial correspondent of Los Angeles Herald: Dr. J. C. Blackington of Alhambra has put in nearly 500 acres of sorghum, and that portion which has been irrigated is up and growing vigorously. Some of the sorghum first planted is higher than a man's head, and still growing. Sorghum is being largely planted for feed. Hay has been worth \$30 a ton in this settlement during the past year.

**HEAVY CROPS IN CAJON VALLEY.**—San Diego Union: If rain does not fall within the next few weeks the grape and raisin crop of the Cajon valley will be one of the largest in its history. The grapes are ripening fast under the mild influence of the sun and plans are already being laid for an early picking. On some ranches grapes are already ripening, but these are all shipped to the markets where they are easily sold. The peach crop is very light, however, but what few peaches are left are excellent. Very few are dried, as they are in demand in the markets, so as soon as they are ripe they are shipped away. The large crop of hay is being harvested slowly, and as it looks now, some must be left when the rains come, as the facilities for harvesting and baling are very inadequate for the amount in sight. Orange and lemon trees are doing nicely, as the supply of water is far larger than that of last year, and it is expected that a large crop will be gathered next picking season. There is some complaint, however, of falling blossoms, but this is only on a few orchards.

### SAN LUIS OBISPO.

**DIFFICULTY IN GETTING GRAIN MOVED.**—San Luis Obispo Tribune: Grain dealers in the vicinity of Los Olivos are finding it impossible to move their grain, on account of the labor troubles in San Francisco. The warehouse and station at Los Olivos are entirely filled and enormous stacks of grain are piled upon the platforms of both places. The quality of the grain harvested throughout that section is far above the average, and while in some places the amount is not large, last year's figures are greatly exceeded. The barley in San Luis Obispo county is of a very fine quality this season. The

grains are large and plump and very bright.

### SANTA BARBARA.

**MUSTARD FALLS IN PRICE.**—Lompoc Record: Mustard has fallen in price in the last thirty days from \$3 per cental to \$2.70. Little seed has been delivered to date and why the decline is a mystery. Most producers will be inclined to store rather than to sell at this price. The experience of farmers in oat production has been so favorable that many hundred acres will be sown next year. The hay is fine feed for horses, and especially dairy cows, and the green feed afforded holds up from two to four weeks longer than grazing from barley.

### SANTA CRUZ.

**FRUIT ITEMS.**—Watsonville Pajaronian: The first carload of apples shipped this season went out last week. It was sent by Otto Raphael to a Los Angeles firm, and consisted of Alexanders.—A representative of a Sydney, Australia, commission firm has contracted for several carloads of apples, mainly red varieties, for shipment this fall to Australia.—The apricot pits of this valley have been sold at prices averaging about \$12 per ton, or nearly double the prices paid last year.—The first carload of apples for shipment out of the State left here last week for Butte, Mont. It was shipped by a Sacramento firm, and consisted of Gravensteins.—There are yet a lot of small orchards in and near the foothills which have not been sold, and most of the apples in these orchards are apt to be sold by weight on delivery at packing houses in this city. Up to \$26 per ton is being offered for good four-tier Bellefleurs and Newtowns delivered at local packing houses.

**HEAVY GRAIN YIELD.**—Santa Cruz Surf: The grain is so unusually heavy in the Soledad district this year that the threshing machines are taxed to their utmost to work it. Probably the finest crop of that district was that of the Binsacca Bros., near the Arroyo Seco, which averaged twenty-three bags to the acre.

### SOLANO.

**ONE TREE YIELDS \$120 IN CHERRIES.**—Vacaville Reporter: Over sixty boxes of cherries off of one tree were gathered by C. M. Chubb, and he netted \$120 therefrom. Some cherries were gathered from this tree which were not included in the above, and shows what a Vacaville fruit tree can do when it really tries.

### SONOMA.

**EXPERIMENTING WITH HEMP GROWING.**—Santa Rosa Press-Democrat: A. McPeak of Guerneville exhibits a bunch of hemp grown on his place as an experiment. John D. Bosch, the Geyserville wineman, furnished the seed to Mr. McPeak. This is believed to be the first attempt to raise hemp in Sonoma county, and its growth attests the fact that its cultivation will be successful. The hemp stands about 7 feet high. An Italian who lives near the McPeak place, and whose parents have followed the hemp-raising industry in Italy since before his birth, has tested the hemp thoroughly and pronounces it to be a good quality—as good as is raised in Italy. Mr. McPeak has a bed of hemp under cultivation, but does not know if he will continue to plant it.

**SEASON'S HOP CROP.**—Santa Rosa Press-Democrat: C. C. Donovan estimates this year's crop offhops in Sonoma county at from 15,000 to 16,000 bales. In 1899 the crop was 18,000 bales, which was the biggest crop ever raised in the county, he says. In 1900 the crop was about 8500 bales. Picking will not commence in Sonoma county until about Sept. 12 or 15, being somewhat later than usual. As a rule, picking begins about Sept. 3.

### SUTTER.

**THE HOP CROP.**—Sutter Independent: Reports of the yield of the hop crop in this section indicate that the growers of this article will be "in it" this season. Prices are good and promise to be better. The picking season will soon be on in full blast. Already around Wheatland and Nicolaus large numbers of people are gathering. It is reported that prices for picking will range from 85 cents to 90 cents per hundred pounds.

**TROUBLE IN GETTING FRUIT BOXES.**—Sutter Independent: Some of the fruit growers hereabout are having trouble getting boxes to ship in. The canneries and men to whom they ship failed to return the empty boxes, and several of them now find that their supply will be exhausted long before the season is over. Giblin Bros. are about 2000 boxes short, and a number of others are considerably worried about their rapidly diminishing supply. Just the reason for this failure to return the empties is not exactly known. It may be that the canneries have more fruit than they can handle and hold back empties to prevent the growers

from shipping more fruit; or it may be from carelessness in getting boxes of different growers mixed.

**DRIED FRUIT SELLING WELL.**—Sutter County Farmer: During the last week many of the growers have sold their dried peaches at prices varying from 5½ to 6½ cents per pound, according to quality. Some who have extra Muirs drying are holding for higher rates.

### TEHAMA.

**THE DAMAGE TWO COLD MORNINGS DID.**—Red Bluff News: J. Granville Jones, one of the largest orchardists of the Vina section, is very busy at present on the orchards, not gathering and curing fruit as he hoped to be, but irrigating and cultivating the trees to keep them from dying. This is the first time in ten years that he has found it necessary to irrigate the trees at this time of the year; but now he finds it necessary, owing to the late hot wave having seriously damaged nearly all the trees, the leaves being dried, shriveled, curled up and ready to fall. Early in the spring he had the finest prospect for a large crop during his experience in fruit raising, and he at that time estimated that he would this year have at the lowest figure 100 carloads of dried fruit; but two extremely cold mornings—which fruit men will not soon forget—came, and the destruction done him by these two frosts amounted to a loss of from \$10,000 to \$50,000.

**BUT LITTLE DRIED FRUIT.**—Red Bluff People's Cause: A fruit buyer who is well posted says that from the territory extending from Marysville to Anderson there is usually shipped about 500 carloads of dried peaches each year, if the fruit season is a fair one. This year, however, there will be only about 120 carloads to ship, which shows the general effects of the late frosts in April. In former seasons thirty carloads of dried peaches have been shipped from Red Bluff, while this season there will not be over five. As to the matter of prunes, he said they were not in it; there are not enough of them to consider.

### TULARE.

**A PRUNE SALE.**—Visalia Delta: Geo. Morell, who eight or ten months ago purchased the C. Van Loan orchard, one mile west of Farmersville, sold his prunes recently to Geo. Birkenhauer. There were fifteen acres of them and they were sold on the trees for \$2500.

**CHOICE PEACHES.**—Visalia Delta: Some very fine peaches are being received at the cannery—the best of the season—and the cutters are giving the fruit a glad welcome. It does not take long for a skillful cutter to do up a box of peaches of the size now coming in, and the earnings of the day are thus materially increased. From \$1.50 to \$2 per day is considered nothing to boast of.

**REMOVING PEACH SKINS BY LYE.**—Visalia Times: A couple of lye vats are being put in at the cannery with which Mr. Rath will try an experiment with Cling peaches. He proposes to remove the skins by dipping them into hot lye. The experiment has been previously tried with more or less success, but Mr. Rath says he has arranged a process that he thinks will do the work thoroughly without the least injury to the peach.

### YOLO.

**GRAPES AND PEARS.**—Woodland Democrat: The outlook for prices for grapes is very promising, and it is to be regretted that the crop is not a full one. In some vineyards the yield is as large as usual, but take it all over the county and the average will not be more than half a crop. Wine grapes are selling for \$25 a ton, and may go even higher. Good table grapes for Eastern shipment are likely to command fancy prices. George Fuchs has sold to the Yolo orchard his Bartlett pear crop. He has about 300 trees on his own place and a lease on the Gibson orchard, west of this city. He received \$15 a ton for his crop. The Bartlett pear crop of this county is hardly up to the usual standard. In most instances the yield will not be more than half the usual amount.

## Horse Owners! Use

GOMBAULT'S

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A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blisters from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.



## THE HOME CIRCLE.

### The Home Light.

The light of home's a wondrous light,  
So tender it is shining,  
So soft it follows through the night,  
Our weary road outlining.  
Though lonely and for years we roam,  
Far from the ones who love us,  
Yet ever shines the light of home,  
Like God's grace spread above us.

The light of home's a wondrous light,  
Through life it follows, seeming,  
Yet when with age the hair is white,  
Clear in the front 'tis gleaming.  
It shines from where our loved ones are,  
Oh, this is love's divining!  
And through the gates of heaven ajar  
At last we see it shining!

—Ripley D. Saunders.

### Nirvana.

We talk and work, we come and go,  
And, then, the close of all we do  
Is gentle Sleep.

We gather up some little store;  
Yet, when 'tis ours, we want no more  
Than dreamless Sleep.

We praise and blame, we smile and frown,  
Then all our weary lives sink down  
In endless Sleep.

—The Academy.

Break now the alabaster box  
Of sympathy and love,  
Amid the cherished friends of earth,  
Ere they are called above.  
How many burdened hearts are here  
That long for present help and cheer.

The kindly words you mean to say  
When they are dead and gone  
Speak now, and fill their souls with joy  
Before the morning's dawn.  
'Tis better far, when friends are near,  
Their saddened hearts to soothe and cheer.

—James J. Reeves.

### Delight's Country Settlement.

"Step up carefully, Delight. The wheels are muddy."

Delight did not step, she jumped, to a seat in the spring wagon beside her father. Back in Fair Meadow again—with the damp smell on the newly-plowed fields, and the May sunset just fading in primrose and purple.

"You're glad to see me?" she whispered, nestling against a rough coat sleeve.

"Well, I guess." The bearded face looked down at her with a sympathetic twinkle under its bushy eyebrows. Delight Hale and her father were made of the same warm-hearted stuff. But, oh, that solitary road after the city lights! The crooning of the frogs instead of the evening street bands and the patter of incessant passing.

"I won't feel it," the girl declared stoutly within herself. "Not after all there is to remember, anyway."

They drew up before a brightly lighted house. Mrs. Hale stood at the side door, gentle, dignified, her older daughter beside her. Delight ran breezily in to them.

"Well?" was the quiet greeting.

"Oh, mother, such a lovely time as I've had—and the last words were the best of all; that week with Cousin Agnes at the Settlement. Only think, Rose, of going about in the slums and seeing all the dreadful tenements, and their dear little kindergartens with the cunningest mites, and the evenings when they had the neighborhood parties, and all the Italians and Germans came. Why, it's simply fascinating! I wouldn't have missed it for the world."

"You don't say a word about Aunt Katie," remarked Rose; "nor her tea, nor anything."

"Well, they were nice, too, of course. I can tell about it little by little, as time goes on; but the Settlement work has simply fired me. Mother, why can't we do something like it here?"

Mrs. Hale smiled forbearingly. Delight usually came home in this state of mind.

"But you know there are no poor here, dear. Every one in the village is pretty comfortable."

"And they wouldn't thank you for

meddling with their affairs," finished Rose. "Come, now, Delight, have your supper and tell us something interesting."

Oh, Rose was so narrow, so satisfied with her unprogressive atmosphere! Delight said this to herself, a small root of bitterness springing up in her soul. Her mother and sister had no outlook beyond the magazine club and the missionary society, the one Polish baby in the village for which they had, it is true, provided petticoats, and the household happenings of every day. It was not respectable to be poor in Fair Meadow, and few people had the temerity to plead restricted circumstances. Men strove to outdo their neighbors in barns, tools and livestock, women in sewing machines, carpets and fresh paint. There was no real fellow feeling, and few hopeless dregs of society would always remain at the bottom. What a field for neighborhood guild work! but a very hard and stony one to put a plow into.

Dr. Zabriskie was driving by the next morning as she was sweeping the front steps.

"Hallo!" he called, pulling up. "Come back full of ideas, eh!"

"How did you know?" she asked. "Guessed. What is it this time?"

"Oh, Settlement work. I wish I could try it here. Dr. Zabriskie, do you ever feel discouraged because you want to reform the world, and can never find any world to reform?"

The doctor looked serious this time. "In for reforms, are you? Whew! I'll give you a chance," and he leaned over confidentially as Delight stood patting the horse. "Maybe it isn't just in the line of the city things; but upon my word, the right person could do a lot. Do you know Tim McGlather's family over on the hill behind the academy? Make 'em clean their well. Two children are down with chills and fever, and there'll be typhoid next. They won't listen to me. Try some of the Settlement dodges on 'em, bribe 'em, scare 'em, anything."

"Could I, if you can't?" Delight's eyes were sparkling.

"If you go to work right. Then the Italians over by the railroad. Garbage round the doorway; diphtheria there last winter—ugh! Give 'em a party and tell 'em how to be decent. Oh, come to me when you want work!"—and the doctor drove on.

Delight stood still with a stunned feeling! A party for the Italians! She could see her mother's consternation at such a proposal, and Rose's elevated nostrils. As for the McGlathers, that would be easier. The next forenoon found her starting on her first errand of persuasive philanthropy.

The mistress of the one-story establishment on Academy Hill stood outside at an overflowing washtub under a pink-blossomed apple tree. She took Delight's call, naturally, for a business errand.

"Mornin' ma'am," she remarked, looking up and then bending afresh over her board with the slap of a soapy garment upon its surface. Delight felt rather hypocritical.

"I came to inquire after Tommy and Honora," she said. "I heard they were ill."

"Yis'm, they are," replied Mrs. McGlathers. "It's pinin' away those children are. I'm after thinkin' Hannora 'll never come around when the chills takes her; it's awful. She'll be that blue—"

"What a pity! Have you had the doctor?" asked Delight, politely.

Mrs. McGlathers slapped and soaped the sheet in her hands.

"Oh, them doctors!" she exclaimed derisively. "Deed'n I've paid enough to 'em—and my poor children worse every day. Zaburskie, he was the last, and he'd too much to say altogether. I'll not have him no more!" suggestively wringing a towel. Delight glanced at three heads in the window; two with white faces. She must do something.

"But you know, Mrs. McGlathers, Dr. Zabriskie may be right. It's so easy for wells to get—spoiled, and lots of sickness comes from bad water. Our well was cleaned just lately. Can I go in? I've got some pictures for the children."

"Oh, yes," answered their mother. Tommy! Hannora! here's a lady."

She took observations during the trip and later returned to the attack.

"Mrs. McGlathers, do you know I really believe it would be a good plan to clean that well out and make a new floor over it. Tim could do it, couldn't he?"

Mrs. McGlather's face flushed.

"He's a hard workin' man every day o' the week. Faith, he couldn't take the time to save the poor kitty when she got down them cracks and drowned—"

"What?" Delight's look of horror fairly startled her hostess. "Well, it must need cleaning, I should think. And you're such a splendid cleaner, yourself, Mrs. McGlathers. Now if only you could go down that well, it would be left as tidy as could be."

This was a stroke of tact. Mrs. McGlathers recollected her annual week of spring cleaning at the Hales'; the cast-off clothing and carpets which had fallen to her lot, and turned pathetic.

"Where'd I have the water for my work with the well dry? Could I bring it in pails from Flaherty's below there, and be the whole day at it?"

Delight turned away dejected. It certainly did not look feasible to clean the well. How could Tim be bribed to give the time or Mrs. McGlathers to sacrifice the water? It was a relief to meet her father on the way home; she could always confide in him safely, and his slow, hearty laugh was rather soothing than otherwise.

"The old woman's a tough subject; she can't see beyond her tub. But maybe I could manage Tim. It just occurs to me that he's going to raise another little tobacco crop this year—the pride of his life. Last year he couldn't hire a shed to cure it in, and tried to hang it in the loft of his shanty. Now I tell you what; I might offer to let him have the little old toolhouse that we moved back behind the garden—I haven't any use for it—on condition that he'll straighten up the well. He'll jump at the chance."

"You dear father!" Delight drew a long breath of relief. "And I must think of something to do for Mrs. McGlathers and the children. Cousin Agnes would say it ought to be something that will widen their horizon. I wish I could consult her. But you see, father, I can't invite them to the house; if I only could, and the Italians, too!"

Nathan Hale looked sympathetic. He longed to keep up with his eager little daughter.

"Conditions aren't favorable," he whispered, as they entered the gateway. "And besides, they would have to have regular settlement bringing-up before they'd budge. You keep your eyes open and the chance will come."

But the McGlathers' horizon weighed long on Delight's mind. It seemed to be limited by the well, which Tim did not get at until the setting in of the dry, hot season, so that it remained empty. She went to visit Tommy and Honora, and found their mother toiling up from Flaherty's with a pail in each hand, and a countenance of purple wrath. Oh, if she could only give them all a rousing good time! But one morning an advertisement appeared on the fences to the effect that the famous Pike family were coming to Fair Meadow. There were pictures of Mr. and Mrs. Pike and their eight children, each of whom played some musical instrument, or furnished some unique form of entertainment; there were to be choruses, temperance songs, etc., and Master Adolphus Pike, the youngest, would give his inimitable rendering of "Father, Dear Father, Come Home With Me Now." Town Hall, tickets 25 cents, children 10. Just the thing! It might be a mere alley compared to the broad, sociable highway into which she hoped to lead her reforms, but nevertheless Tommy and Honora and all the rest should have an invitation.

Mrs. McGlathers received these overtures with gloom.

But Delight coaxed, and at last maternal affection triumphed. For the children's sake she succumbed. On the eventful evening a gay procession filed

up to the front seats of the Town Hall—Tommy's thin face brilliant from the effects of soapsuds, and the little girls in the glory of new summer hats, with their mother's scarlet shawl, furnished aggressive explanation of the damp brow which she mopped as they reached their seats. It was an occasion of moment to the young reformer also; the first move toward social equality in Fair Meadow. She forgot Rose's sneer and her mother's gentle wonder.

It was a terribly close evening, the air was choked with dust. But the Pike family put forth its best efforts. Mrs. Pike played rattling accompaniments to her husband's baritone songs. Master Clarence Pike gave a wonderful solo, Miss Alice Pike recited, Miss Coralie Pike danced; the smallest of the eight brought tears to all eyes when he sang "Father, Dear Father"; two twin-boy Pikes enchanted the galleries with contortions. But, toward the end, flashes of lightning began to glimmer through the windows, followed by long growls of thunder. Then came a torrent of rain that fairly drowned one of Mr. Pike's brilliant impersonations. Men went out to get their horses under cover, ladies looked down alarmed at their spring fineries. The cool, scent-laden air blew in refreshingly. Delight looked around apprehensively at Mrs. McGlathers; but that rubicund dame was smiling, unconscious of the storm. Never since she married Tim McGlathers had she been invited and escorted to a "high-toned" public entertainment by a lady; her children able to hold up their heads with the best people of the place. After this the deluge was welcome to spend its fury upon mere outward apparel.

A quiet summer rain was falling as the audience came out. Delight was nervously revolving some plan for getting her charges home when a lantern flashed from the steps, and her father's cheery countenance confronted her.

"Hallo!" he exclaimed. "Come on, I've got the big democrat with the covers down. Pile 'em all in and we'll deliver 'em as dry as bones."

"Oh!" Delight's grateful heart swelled beyond the power of speech. When the red shawl, spring hats, sleepy Tommy and all, had been safely deposited, she nestled up to him in an ecstasy of gratitude.

"You don't know what a relief it was to see you, father, dear. To think of your harnessing up and coming after us all in the dark and wet! Well, it made the whole difference between success and failure—that's all. Of course, you want even an awfully small one-horse attempt at a thing to succeed. I know this venture was very incomplete, but then—"

"But then it was a bit of the right thing, after all," he whispered in the dark. "And when you can't do all you want to, it's well to go ahead and accomplish what you can."

So Delight fell asleep happy. It hadn't been on Settlement principles exactly; the Italians must still be encountered and might prove hopeless; but she had clasped hands with one fellow woman over a social chasm, and, best of all, there would be no more trips to Flaherty's. Nature, herself, had taken in hand the filling of Mrs. McGlather's well.—The Churchman.

"Our milk," urged the agent, "is sterilized." The housewife laughed scornfully. "There is a lot of foolishness about sterilization and all sorts of health precautions these days," she said. "I don't take any stock in it myself. Our ancestors didn't resort to such methods." "True," admitted the agent, "and look at the result. They are all dead."—Chicago Post.

McJIGGER—Did you ever notice what frightfully bad grammar some of our statesmen use? Thingumbob—Yes, I suppose they do their best to imitate Washington. McJigger—Why what nonsense! Washington was a cultured man. Thingumbob—And yet there is no doubt that he slaughtered the King's English.—Philadelphia Press.



## The Village Smithy.

No more the roan and chestnut, the pie-bald and the gray,  
Pound their iron hoofs upon the smithy's floor;  
No more the gig and buggy, the buck-board and coupe,  
Stand broken down and helpless at the door.

He'll pump you full of ether with an auto sorter laugh,  
He's fixtures ready made to mend the fake,  
If your tire has collapsed he'll swell it for a half,  
With perhaps another dollar for a break.

No more he talks of "hoss" as he stands upon the green  
And waits the auto trav'ler on his way.  
He's an artist now in wind, and he's happy and serene,  
For he's pumping, pumping dollars all the day.  
—New York Sun.

## Impure Breath.

The source of impurities of the breath may be found in three regions, namely: the lungs, the stomach and the upper air passages, including the mouth, throat and the nose.

In the greatest number of cases impure breath is the result of conditions in the mouth, throat or nose, conditions which render possible a lodgment and growth of microscopic vegetable parasites. These parasites—the lodgment of which in many cases is so secure that the acts of chewing and swallowing do not materially disturb them—give rise, in the course of their growth and decay, to the unpleasant odors.

Prevention and remedy, therefore, depend upon the successful search for these vegetable parasites, and their removal from the harbors where they accumulate.

Decayed teeth offer ideal conditions for the growth of certain germs and fungi. At times no cavities occur, and yet an accumulation of fungoid material renders the breath offensive. In such cases brushing must be supplemented by the use of an antiseptic mouth wash.

Other states of the mouth and throat giving rise to odors, although less well known, are nevertheless common. The depressions known as "crypts," commonly found in enlarged tonsils, furnish harbors for vegetable parasites. Large accumulations may have taken place, partly of food, partly of fungoid growth, giving rise to perhaps no other symptom than unpleasant breath.

Deep accumulations of furring on the tongue give rise to similar unpleasant symptoms. An observer of his own tongue, judging by its appearance, might suppose his stomach to be in an alarming condition. Removal of the thick furring by gentle scraping and the use of antiseptic mouth washes usually prove entirely remedial. Dr. Holmes was accustomed to prescribe a little silver hoe for the purpose of removing this accumulation.

Certain disorders of the nose give rise to some of the most pervasive and unpleasant odors of the breath. Even these, however, are amenable to remedies, although the home use of antiseptic sprays and douches must sometimes be supplemented by treatment at the hands of a physician.

The conditions of the lungs and stomach giving rise to foulness of the breath likewise require more aid than can usually be given by home treatment, although these states are commonly to be prevented by the observance of hygienic rules.

Very rarely do cases of impure breath arise from causes so obscure as to be incapable of relief or improvement.—Youth's Companion.

"WELL," said he, anxious to patch up their quarrel of yesterday, "aren't you curious to know what's in the package?"

"Not very," his wife, still unrelenting, replied indifferently.

"It's something for the one I love best in all the world."

"Ah, I suppose it's those suspenders you said you needed."—Philadelphia Press.

## Airy Mosquito Netting.

The usual summer problem of how best to keep the mosquitoes and flies out of your rooms, and at the same time to admit as much air as possible, is now open for solution.

As the best method of keeping out the mosquitoes is, in most cases, the worst one for the free admission of air, discomfort from at least one of these sources seems almost inevitable.

Probably the best method so far suggested is one which has been adopted extensively in southern France.

It is the result of the observations of a scientist, who ascertained that flies, mosquitoes, and, in fact, all winged insects, are afraid to enter an opening, even though it be several times their own size, if there be darkness beyond it.

He soon put his discovery to a practical purpose. Cover your open windows with some cheap netting, made either of white or light-colored thread, with meshes an inch or more in diameter. The comparatively large openings of the net will not make it any the less effective, but, on the contrary, is the chief recommendation of the new method.

While the meshes are large enough to admit several mosquitoes or flies with extended wings at the same time, it will be found that the flies will be excluded simply from their dread of venturing across the threadwork.

The beauty of this method is that the admission of the air is in no way impeded, the wideness of the netting allowing the air to enter almost as freely as if the windows were unenclosed.

The main objection to the present method of using very close netting is that, while it is undoubtedly as effective, although from a different reason, in keeping out the mosquitoes and flies, it excludes a great deal of the air at the same time.

There is but one condition to the proper working of the suggested system—the light must enter from one side of the room only, for if you have windows on the opposite also, the flies will pass through the netting. Nevertheless, that obstacle may be easily overcome by pulling down the shades of one set of windows, especially as it is hardly ever desirable to have the sunshine and light come from both sides at once.

The same system of netting may be applied to hammocks and is equally effective. In fact, it is well known that fishermen protect themselves from gnats in a similar manner, covering themselves with their casting nets, through the meshes of which the gnats will not pass. The netting should be similar to a tennis net.—Exchange.

GREENE—They say that Senator Keener is on the make. They even go so far as to say that new house of his was given him in payment for his vote.

Gray—It puts me out of temper to hear such slanders? It is as far as possible from the truth! I know all about it. It was this way: Some people who were interested in a certain bill bet him that house that he would vote against the bill, and he didn't and won the house. That was all there was about it. The idea of Keener's being open to bribery!—Boston Transcript.

Among the summer hills and dales  
She wanders night and day,  
Although she finds her searching fails,  
For no man comes her way;  
And while she vows she can't exist  
Without a single one,  
Yet all the summer through she's kissed,  
But only by the sun.  
—Leslie's Weekly.

"WHAT did Columbus discover?" asked the teacher of the juvenile class. "The Atlantic ocean," answered the small boy at the foot of the class. "How do you know that?" asked the teacher. "Because," replied the youthful student, "my book says he came across it."—Chicago News.

LADY—The dog you sold me last week came near eating my little boy.

Dealer—Well, you said you wanted a dog that was fond of children, didn't you?

## DOMESTIC ECONOMY.

## Canning Fruit.

From various sources, including my own experience, I have found that to can fruit so as to insure its perfect preservation the following rules should be observed:

Use only ripe, perfect fruit. Over-ripe fruit should not be used, nor any that shows the least evidence of decay. Only perfectly clean, sound fruit should go into the jar. Make syrup of granulated sugar. Other kinds may be used, but cane is the best. Use four tablespoonfuls to one quart of fruit; more or less may be used to suit the taste. I have learned by actual experience that sugar is not necessary to the preservation of the fruit. If the syrup made is not sufficient to nearly cover the fruit while cooking, add enough water to make it do so. Apricots, plums, peaches, grapes and similar fruits should be boiled from five to seven minutes; pears, quinces and the solid fruits should be thoroughly cooked before canning. Carefully skim off all impurities that may appear while cooking. During the process of cooking raise the fruit from the bottom of the saucepan or kettle, so that it may cook evenly, and in doing this be careful not to break the fruit in pieces. I find it best not to cook more than two quarts at one time in the same vessel, as the fruit can be more easily handled in small than in large quantities.

I prepare jars in this manner: Place them in warm water and gradually add warmer water until it nearly reaches the boiling point. Be careful to let no water get inside the jar. Let the jars remain in the hot water while filling, and then fill as quickly as possible, putting in the fruit boiling hot. Carefully press the fruit down in the jar so all the interstices may be filled, compelling some to overflow, as the syrup serves as a cement in sealing the jar. Place the rubber on the jar and be careful to press the lid or cover of the jar down equally all around; in short, do everything possible to exclude the air. The wires on new jars have force enough to firmly hold the lid down, but seldom the second time without using one or more thicknesses of leather. Paper should not be used, as it is more likely to yield. Be careful to press the wire between the two small beads at the top of the lid. Never use the same rubber the second time. In wiping the jar be careful not to remove or disturb the syrup around the rubber.

Keep the jars in a dark, well ventilated place, and let them remain undisturbed until brought for use.

Last year I put up over 140 jars, and the fruit in every one was in perfect condition when opened for use.

I may add that jars should be used for no other purpose than to hold fruit. When emptied they should be immediately and thoroughly washed in cold water and dried in the sun, after which cover, set away, and they will be ready for use again.—Mrs. John Wasson.

## Domestic Hints.

FANCY POTATO SALAD.—A salad that is dainty in appearance may be made by cooking very thick slices of new potatoes in highly seasoned white soup stock until they are tender. Then drain and put them away to get cold. Boil radishes and cut the skin to represent rose petals. Place the slices of potato on a bed of cress, and put in the center of each some mayonnaise dressing, placing a radish in the middle of it. A prettier effect will be obtained if the dressing is colored green.

DEVILED MEAT.—Cut thick slices of underdone meat and make deep gashes on both sides; put into a plate a teaspoonful of mustard, a tablespoonful of oil, a teaspoonful of vinegar, a few drops of lemon juice and a grain of cayenne. Work these ingredients together, and work the paste well into the gashes by rubbing. Grease the gridiron, having it hot, and turn the meat often until done. Serve on a hot dish, with sauce made of melted butter, parsley chopped fine, lemon juice a few drops, and pepper and salt.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Aug. 21, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Dec.
Wednesday.....	74 3/4 @ 72 3/4	76 3/4 @ 75
Thursday.....	72 3/4 @ 71 1/4	74 3/4 @ 73 1/4
Friday.....	71 1/4 @ 72	72 3/4 @ 74 1/4
Saturday.....	71 1/4 @ 71 1/4	74 3/4 @ 73 1/4
Monday.....	70 3/4 @ 71 1/4	72 3/4 @ 73 1/4
Tuesday.....	71 1/4 @ 69 3/4	73 3/4 @ 72 1/4

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	5s 9 1/2 d	5s 11 1/4 d
Thursday.....	5s 8 3/4 d	5s 10 1/4 d
Friday.....	5s 7 3/4 d	5s 9 3/4 d
Saturday.....	5s 8 3/4 d	5s 10 3/4 d
Monday.....	5s 7 3/4 d	5s 9 3/4 d
Tuesday.....	5s 7 1/4 d	5s 10 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 02 1/4 @ 1 02 1/2	— @ —
Friday.....	1 02 1/4 @ 1 02 1/2	— @ —
Saturday.....	1 02 1/4 @ —	— @ —
Monday.....	1 02 1/4 @ 1 02 1/2	1 06 @ 1 06 3/4
Tuesday.....	1 01 1/2 @ 1 01 1/2	— @ —
Wednesday.....	1 02 @ 1 01 1/2	— @ —

## WHEAT.

The pronounced dullness previously noted as existing in local grain circles continued into the current week, all on account of the prolonged strike. With a fleet of over thirty ships here on the engaged list and awaiting cargoes; with plenty of wheat to load the same, most of the grain necessary being already in the hands of shippers; and with a fairly active foreign demand lately for this cereal, there should be a free movement outward, and doubtless would be if the usual facilities existed for receiving and dispatching grain. As it is, the current month promises in the matter of wheat shipments from this port to be one of the dullest on record. Not a single clearance has been made thus far this month for Europe, and only 1500 tons have been forwarded outward by steamers for South America, while for corresponding time last year nearly 10,000 tons had been dispatched, with ships then in lighter supply than at this date and the foreign demand not particularly active. Prices have shown little quotable change, but there has been naturally little opportunity to thoroughly test values. The United States visible supply east of the Rockies was this week reduced 1,449,000 bushels, leaving 26,770,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.02 1/2 @ 1.01 1/2.  
May, 1902, delivery, \$1.06 3/4 @ 1.06.  
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.02 @ 1.01 1/2; May, 1902, —.

California Milling, old.....	\$1 02 1/4 @ 1 05
Cal. No. 1 shipping, alongside.....	97 1/2 @ 98 3/4
Oregon Valley.....	97 1/4 @ 1 02 1/4
Washington Blue Stem.....	1 00 @ 1 05
Washington Club.....	97 1/4 @ 1 00
Off qualities wheat.....	95 @ 97 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	68 3/4 d @ 68 1/4 d	68 d @ 68 1/4 d
Freight rates.....	37 1/4 @ 38 1/4 s	37 1/4 @ 40 s
Local market.....	\$1 03 1/4 @ 1 06 1/4	96 1/4 @ 1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Values are without quotable improvement, although it would seem that any changes in the near future are more apt to be to firmer than to easier figures. Spot supplies have been lately materially reduced, and might be still lighter if normal conditions prevailed in shipping circles. Demand on local account has been lately of more than ordinarily light volume.

Superfine, lower grades.....	22 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

There is no lack of Eastern and European demand for California barley, but it has been impossible to get much of this cereal aboard ship or cars lately, owing to labor troubles. A steamer cleared the past week for Panama with 3,200 tons

barley for New York. More is to follow by steamer and sail for same destination. Several of the ships on the engaged list for Europe will take barley as whole or part cargo. Prices for all descriptions have remained at much the same quotable range as preceding week. Business on local account has been of very light volume. Call Board trading was likewise of exceedingly slim proportions.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	77 1/4 @ 83 1/4

## OATS.

The awarding since last review of a Government contract for 4,000 tons of oats for shipment to Manila caused a decidedly firmer tone to prevail, with asking figures on a higher plane than had been ruling. Most of the oats called for by the Government had been, however, previously arranged for. Buyers on local account have been rather slow in operating at the advanced prices asked.

White Oats, fancy feed.....	1 20 @ 1 25
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 15
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 22 1/4 @ 1 30
Black Russian.....	85 @ 1 15
Red.....	95 @ 1 25

## CORN.

Market is almost bare of stocks, and it is but natural under existing conditions that values should be on a high plane. Quotations for the present are largely nominal, however, owing to the scanty offerings of both domestic and Eastern product.

Large White, good to choice.....	1 70 @ 1 75
Large Yellow.....	1 65 @ 1 70
Small Yellow.....	1 65 @ 1 70
Eastern, in bulk (carload lots).....	1 60 @ —

## RYE.

Not much doing in this cereal. Market shows much the same easy tone as for some weeks past.

Good to choice, new.....	77 1/4 @ 80
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## BUCKWHEAT.

In the matter of quotable values or the general tone of the market, there are no changes to record. The immediate inquiry is very light.

Good to choice.....	1 65 @ 1 75
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## BEANS.

Market remains firm, with stocks light and a fairly active inquiry for shipment, mainly on Eastern account. New crop beans will begin to arrive in about a month, and in the meantime supplies of old are likely to be reduced to small proportions. New crop should meet with a firm market, existing conditions being favorable, but dealers will doubtless make efforts to depress values as much as possible while stocking up with new beans, this being natural and their usual custom. There will be more than ordinary eagerness, however, to secure supplies this season, and as a result the competition between buyers may render it impossible for dealers to bear the market to the extent they desire.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 90 @ 5 00
Lady Washington.....	4 00 @ 4 25
Pinks.....	2 40 @ 2 50
Bayos, good to choice.....	2 75 @ 2 85
Reds.....	3 00 @ 3 25
Red Kidney.....	4 25 @ 4 50
Limas, good to choice.....	6 40 @ 6 50
Black-eye Beans.....	3 50 @ 3 75
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

## DRIED PEAS.

A few Sacramento River peas are offering, mostly Green of rather ordinary quality, and for these the market is weak. Choice Green are in light supply and very steadily held. Niles peas are not offering in heavy quantity, nor are they at present receiving noteworthy attention.

Green Peas, California.....	2 25 @ 2 50
Niles Peas.....	1 50 @ 1 75

## WOOL.

There is a good demand for all free wools, and the market is firm at prevailing values, with very little good to choice stock offering in this center from first bands. Dealers are now taking wool which a few months ago they could not be induced to look at under any circumstances. Even small lots and odds and ends are not beneath the notice at this date of some of the heaviest operators.

## SPRING.

Humboldt and Mendocino.....	14 @ 16
Humboldt and Mendocino Lambs.....	11 @ —
Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Mountain, free.....	8 @ 10
San Joaquin and Plains.....	7 @ 9
San Joaquin Lambs.....	6 1/2 @ 8

## HOPS.

Picking is now in progress in the Sacramento Valley and new hops will be on the market at an early day. While the crop on this coast will be lighter than last year, the quality promises to be in the main of good average and better than last season. No business in new has been yet reported. Dealers are talking 10 @ 11c. for choice, but growers are contending for materially higher figures. Last year's hops are now quoted in the East at 11 @ 15c. as to quality, and these figures correspond closely, as near as can be ascertained, with the views of growers as to values here for hops of this year's crop.

Good to choice 1901 crop.....	11 @ 13
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## HAY AND STRAW.

The market has not shown much life since last review, the continued strike operating against free arrivals and free deliveries. Just about enough hay is coming forward to satisfy the more urgent demand, or to accommodate buyers willing and able to do their own hauling. Quotable values were without appreciable change. Alfalfa continues to command better figures than stable hay, being offered very sparingly at present date. Straw is arriving in only moderate quantity, but prices remain at same range current for some weeks past.

Wheat, good to choice.....	7 50 @ 10 00
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 50 @ 9 00
Alfalfa.....	8 50 @ 10 50
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 3/4 bale.....	25 @ 40

## MILLSTUFFS.

In the matter of the lightness of supplies, the market for mill offal has been going from bad to worse. Bran and Middlings are commanding such fancy prices that it would seem as though it would almost pay millers to run for the single purpose of turning out feed. Low-priced flour has been lately going for Middlings. Rolled Barley rules steady. Milled Corn is high.

Bran, 3/4 ton.....	20 00 @ 21 00
Middlings.....	21 50 @ 23 00
Shorts, Oregon.....	20 00 @ 22 00
Barley, Rolled.....	17 00 @ 17 50
Cornmeal.....	33 00 @ —
Cracked Corn.....	34 00 @ —

## SEEDS.

Little doing here in seeds of any description. Bids on Mustard Seed are reported reduced to \$2.70 per cental at producing points. The local market is and has been for some time virtually bare of Mustard.

Flax.....	2 50 @ 3 00
Canary.....	3 1/4 @ 3 1/4
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/4

## BAGS AND BAGGING.

The great cry made early in the season about scarcity of Grain Bags, not enough to go around, and more talk of the same sort, is now almost forgotten. As we predicted would be the case, there are Grain Bags left, and they are obtainable for less money now than a month ago. The scare was gotten up in the interest of those who had bags to sell.

Calcutta Grain Bags, spot.....	7 1/2 @ 8 1/2
San Francisco Grain Bags, 22x36, spot.....	7 1/2 @ 8
Wool Sacks, 4 lbs.....	31 @ 36
Wool Sacks, 3 1/2 lbs.....	32 @ 31
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/2
Fruit Sacks, cotton.....	6 1/2 @ 7 1/2

## HIDES, PELTS AND TALLOW.

No special changes have been effected in this market during the week under review. Values for Hides and Pelts are fairly steady. Demand for Tallow is sufficient to absorb all offerings at full current rates.

Only select bides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/2 @ —	9 @ —
Medium Steers, 48 to 56 lbs.....	9 1/2 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/2 @ 9	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/2 @ 9	8 @ —
Wet Salted Kip.....	9 1/2 @ —	8 1/2 @ —
Wet Salted Veal.....	9 1/2 @ —	8 1/2 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	15 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	— @ —
Salted Horse Hides, medium.....	2 00 @ —	— @ —
Salted Horse Hides, small.....	1 00 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 00 @ —	— @ —
Dry Colts' Hides.....	50 @ —	— @ —
Pelts, long wool, 3/4 skin.....	75 @ —	60 @ —
Pelts, medium, 3/4 skin.....	50 @ —	40 @ —
Pelts, short wool, 3/4 skin.....	30 @ —	20 @ —
Pelts, shearing, 3/4 skin.....	10 @ —	25 @ —

Deer Skins, best summer.....	35 @ —
Deer Skins, good medium.....	— @ 30
Deer Skins, thin winter.....	— @ 10
Elk Hides.....	10 @ 12
Tallow, good quality.....	4 1/2 @ 4 3/4
Tallow, No. 2.....	4 @ 4 1/4
Goat Skins, perfect.....	30 @ 37 1/2
Goat Skins, damaged.....	10 @ 20
Kid Skins.....	5 @ 10

## HONEY.

Business in this product continues of a slow order, the bids of large buyers being under the views of the bee men. Transfers are mainly in a small jobbing way to retailers. Spot stocks are not large of either Comb or Extracted. Quotations represent as nearly as possible under existing conditions the wholesale values current in this center. Where honey is peddled or jobbed out, an advance on these figures is realized.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/2 @ —
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7 1/2

## BEESWAX.

Market is not burdened with offerings. Sales effected are at generally unchanged values.

Good to choice, light, 3/4 lb.....	24 @ 28
Dark.....	26 @ 25

## LIVE STOCK AND MEATS.

Beef is offering in sufficient quantity for current needs, the immediate demand being only fair. Prices are unchanged. Mutton is ruling tolerably steady, supplies and demand for the present being of much the same volume. Veal is not very plentiful, but is not quotably bigger. Most of the Lambs now arriving are rather large and such go at inside quotations. Hogs are in sufficiently liberal receipt to cause the market to incline in favor of packers.

Beef, first quality, dressed, net 3/4 lb.....	6 1/4 @ 6 1/4
Beef, second quality.....	6 @ 6 1/4
Beef, third quality.....	5 1/2 @ —
Mutton—ewes, 6 1/2 @ 7c; wethers.....	7 @ 7 1/4
Hogs, hard grain fed, medium.....	6 1/2 @ 6 1/2
Hogs, small, fat.....	6 1/2 @ 6 1/2
Hogs, large, hard.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	7 1/4 @ 7 1/4
Veal, small, 3/4 lb.....	9 @ 10
Veal, large, 3/4 lb.....	7 1/2 @ 8
Lamb, spring, 3/4 lb.....	8 @ —

## POULTRY.

The market has been fairly firm for most kinds of poultry, but quotable rates remain at much the same range as noted in last review. Offerings met as a rule with rather prompt sale, if the poultry was in good condition. Where offerings were especially desirable, bigger prices than quoted were realized. Quotations on Turkeys are for old birds. For a few large and fat Young Turkeys 20c. per lb. was paid.

Turkeys, live hens, 3/4 lb.....	10 @ 12
Turkeys, live gobblers, 3/4 lb.....	8 @ 10
Hens, California, 3/4 dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 50 @ 5 50
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 00 @ 2 50
Ducks, old, 3/4 dozen.....	2 50 @ 3 00
Ducks, young, 3/4 dozen.....	3 00 @ 4 50
Geese, 3/4 pair.....	1 25 @ 1 50
Goslings, 3/4 pair.....	1 25 @ 1 50
Pigeons, old, 3/4 dozen.....	1 50 @ 1 75
Pigeons, young.....	1 25 @ 1 50

## BUTTER.

Strictly choice to select fresh was not in heavy receipt, nor is it likely to be for several months to come, as green feed is running down and a large number of cows are running dry in many sections. Butter of best quality is meeting with a moderately firm market, but medium and common grades of fresh are dragging at rather low rates, such having to compete with packed stock, and at same or even easier figures, many buyers giving beld and packed butter the preference.

Creamery, extras, 3/4 lb.....	24 @ 25
Creamery, firsts.....	22 @ 23
Dairy, select.....	22 @ —
Dairy, firsts.....	19 @ 21
Dairy, seconds.....	16 @ 18
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/2

## CHEESE.

Stocks are of very moderate volume, and there is little probability that the quantity offering will prove excessive for some months to come. Values are being well maintained at prevailing range for both the regular flats and the small sizes.

California, fancy flat, new.....	10 @ 11
California, good to choice.....	9 1/2 @ 10
California, fair to good.....	9 @ 9 1/2
California Cheddar.....	— @ —
California, "Young Americas".....	10 1/2 @ 11 1/2

## EGGS.

Uniformly large and white fresh eggs, coming direct from near-by benneries, are meeting with fairly good demand and bringing slightly firmer figures. With this exception, however, the market is



not noteworthy for strength. Common qualities are not eagerly sought after, cold storage stock being taken instead. Supplies of cold storage eggs are heavy, both Eastern and domestic.

California, select, large, white and fresh.	25	@—
California, select, irregular color & size.	22	@24
California, good to choice store.	19	@21
Eastern, good to choice.	18	@20
Cold Storage.	19	@21

VEGETABLES.

Market for most kinds of vegetables now in season ruled quiet and easy at practically unchanged values. Onion market showed more firmness, however, with active demand for shipment, mainly on Australian account. Tomatoes were scarce and high, immediately after last review, but have since declined. Green Peppers were most of the week in excessive receipt.

Asparagus, $\frac{1}{2}$ box.	75	@2 00
Beans, String, $\frac{1}{2}$ lb.	14 $\frac{1}{2}$	@ 2 $\frac{1}{2}$
Beans, Lima, $\frac{1}{2}$ lb.	2	@ 3
Beans, Wax, $\frac{1}{2}$ lb.	—	@ —
Cabbage, choice garden, $\frac{1}{2}$ 100 lbs.	35	@ 40
Cauliflower, $\frac{1}{2}$ dozen.	40	@ 50
Corn, Green, $\frac{1}{2}$ sack.	50	@ 75
Corn, Green, Alameda, $\frac{1}{2}$ large crate.	75	@ 1 00
Cucumbers, Bay, $\frac{1}{2}$ large box.	25	@ 35
Egg Plant, $\frac{1}{2}$ box.	30	@ 50
Garlic, $\frac{1}{2}$ lb.	2	@ 3
Okra, Green, $\frac{1}{2}$ box.	35	@ 70
Onions, Yellow Danver, $\frac{1}{2}$ cental.	90	@ 1 00
Peas, Sweet garden, $\frac{1}{2}$ lb.	2	@ 2 $\frac{1}{2}$
Peas, good to choice, $\frac{1}{2}$ sack.	75	@ 1 25
Peppers, Green Chile, $\frac{1}{2}$ sack.	30	@ 50
Peppers, Bell, $\frac{1}{2}$ box.	40	@ 60
Squash Summer, $\frac{1}{2}$ small box.	25	@ 35
Summer Squash, Bay, $\frac{1}{2}$ large box.	50	@ 75
Tomatoes, River, $\frac{1}{2}$ large box.	60	@ 90
Tomatoes, $\frac{1}{2}$ small box.	30	@ 50

POTATOES.

Difficulty has been experienced in filling all orders for potatoes, the demand much of the time being in excess of the supply. For good Sacramento River Burbanks in carload lots \$1.45 per cental was realized. That shipments will continue of liberal proportions for some weeks to come is altogether likely. New crop Merced Sweets sold mainly within range of \$1.75 @2 per cental.

Burbanks, Salinas, $\frac{1}{2}$ 100 lbs.	1 45	@ 1 60
San Leandro, in sacks, $\frac{1}{2}$ cental.	1 40	@ 1 60
River Burbanks in sacks, $\frac{1}{2}$ cental.	1 20	@ 1 35
Mission Garnet Chile, in sacks.	1 15	@ 1 30
Sweets, new, $\frac{1}{2}$ cental.	1 75	@ 2 00

The Fruit Market.

FRESH FRUITS.

The market was in a little better shape, so far as facilities for handling consignments were concerned, than at any previous date since the inauguration of the strike. Cannerymen were in most instances running to their full capacity, but largely on contract fruit. Bartlett Pears were in most urgent request for canning, but had to be large, firm, and free from blemish, to be especially sought after. Pears of this description were scarce and hardly quotable in a regular way, but were salable to decidedly good advantage. Plums were in only moderate receipt, but for the ordinary run of offerings the market did not display much strength. For Plums in bulk it was the exception where more than \$20 per ton was realized. Peaches sold at fully as wide a range as preceding week, there being a marked difference in quality of offerings. Select Clings were quotable up to \$45 per ton in bulk, with some sales of extra fancy up to \$55, while for Freestones it was the exception where over \$25 per ton was realized. Grapes were in fairly liberal supply and went at generally easier figures than last quoted. The Melon market inclined in favor of buyers, the weather most of the time being too cool for this fruit. Berries were in reduced receipt and prices tended upward, especially for best qualities.

Apples, Gravenstein, $\frac{1}{2}$ 4-tier box.	90	@ 1 25
Apples, Alexander, $\frac{1}{2}$ 50-lb. box.	50	@ 1 00
Apples, green, $\frac{1}{2}$ small box.	25	@ 40
Blackberries, $\frac{1}{2}$ chest.	3 50	@ 5 00
Cantaloupes, $\frac{1}{2}$ crate.	50	@ 1 00
Figs, 2-layer box.	50	@ 1 00
Grapes, Seedless, $\frac{1}{2}$ crate.	90	@ 1 15
Grapes, Black, $\frac{1}{2}$ crate.	50	@ 1 00
Grapes, Fontainebleau, $\frac{1}{2}$ crate.	50	@ 85
Grapes, Muscat, $\frac{1}{2}$ crate.	75	@ 1 00
Grapes, Tokay, $\frac{1}{2}$ crate.	75	@ 1 25
Logan Berries, $\frac{1}{2}$ chest.	5 00	@ 6 00
Nutmeg Melons, $\frac{1}{2}$ crate.	30	@ 50
Peaches, $\frac{1}{2}$ box.	25	@ 60
Peaches, Freestone, $\frac{1}{2}$ ton.	20 00	@ 25 00
Peaches, good to choice Cling, $\frac{1}{2}$ ton.	35 00	@ 45 00
Pears, Bartlett, $\frac{1}{2}$ ton.	15 00	@ 35 00
Pears, Bartlett's, $\frac{1}{2}$ 40-lb. box.	50	@ 1 25
Pears, other kinds, $\frac{1}{2}$ box.	35	@ 60
Plums, Green Gage, $\frac{1}{2}$ ton.	15 00	@ 20 00
Plums, large size, $\frac{1}{2}$ ton.	20 00	@ 25 00
Plums, $\frac{1}{2}$ crate.	35	@ 65
Prunes, $\frac{1}{2}$ crate.	40	@ 75
Raspberries, $\frac{1}{2}$ chest.	5 00	@ 7 00
Strawberries, Longworth, $\frac{1}{2}$ chest.	5 00	@ 6 00
Strawberries, Large, $\frac{1}{2}$ chest.	4 00	@ 5 00
Watermelons, $\frac{1}{2}$ 100.	6 00	@ 25 00
Whortleberries, $\frac{1}{2}$ lb.	6	@ 8

DRIED FRUITS.

Seldom has the market for cured and evaporated fruits displayed

healthier condition than at this date. There is a good demand, both on shipping and local account, for all varieties offering. Values are being well maintained throughout, and in some instances for especially desirable lots higher figures than are warranted as regular quotations are being realized. The Apple market is particularly noteworthy for strength, being quotably half a cent higher than last week, with active inquiry at the improved figures, the failure of the Apple crop East causing outside orders to roll in here at a rapid rate. That the market for this fruit will rule strong throughout the season is altogether probable, but that values will advance very materially from present rather elevated levels is by no means assured. Apricots continue to be eagerly sought after, and on choice to fancy stock competition between buyers is so keen that some purchases are made at an advance on best figures warranted as regular quotations. Peaches are ruling steady at last quoted range of prices, and while demand for them is not so urgent as for some other kinds, desirable lots can be readily placed at full current quotations, if not at slightly better prices. Pears of choice to fancy quality are so far this season the scarcest article in the way of dried fruit offerings, and market for same is quite unfavorable to buyers, free purchases not being possible at extreme quotations. Pitted Plums are quotably higher for White and Red, and custom could be found at going rates for larger quantities than are now offering. Prunes are moving on the  $\frac{3}{4}$ c. basis for the four sizes Santa Claras. Present stocks, about 38,000,000 lbs., are expected to be closed out before new crop appears. Prices talked of for new Prunes are  $\frac{3}{4}$ c. for Santa Clara 4's and 3c. for outside districts, but values are not yet fixed and may be higher. This year's California Prune crop is now estimated at 55,000,000 lbs., as against 170,000,000 lbs. for 1900.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.	7 $\frac{1}{2}$ @ 8
Apricots, Royal, choice, in sacks, $\frac{1}{2}$ lb.	9 @—
Apricots, Moorpark.	10 @13
Apples, in 50-lb boxes, rings, pressed, fancy.	7 $\frac{1}{2}$ @ 8
Apples, 50-lb boxes, rings, pressed, good to choice.	7 @ 7 $\frac{1}{2}$
Figs, pressed.	5 @ 8
Nectarines, $\frac{1}{2}$ lb.	5 @ 7 $\frac{1}{2}$
Peaches, unpeeled, fancy.	7 $\frac{1}{2}$ @ 8
Peaches, unpeeled, choice.	6 @ 6 $\frac{1}{2}$
Peaches, peeled, in boxes.	12 @14
Pears, halves, choice to fancy.	7 @ 8
Plums, Black, pitted.	4 @ 4 $\frac{1}{2}$
Plums, White and Red.	6 @ 7
Prunes, Silver.	5 $\frac{1}{2}$ @ 6 $\frac{1}{2}$

COMMON SUN-DRIED.

Apricots.	6 @ 7
Apples, sliced.	3 @ 3 $\frac{1}{2}$
Apples, quartered.	3 @ 3 $\frac{1}{2}$
Figs, Black.	3 $\frac{1}{2}$ @ 4
Figs, White.	3 $\frac{1}{2}$ @ 4
Peaches, unpeeled.	5 @ 6
Pears, prime halves.	5 @ 6

RAISINS.

There are some 2-crown loose Muscatel still on the market, for which 5c. is asked f. o. b., Fresno delivery. Other than the above, the market is wholly bare of offerings from the Growers' Association or from first hands.

CITRUS FRUITS.

Orange market is quiet, as is to be looked for at this date, although it is by no means bare of offerings. Two cars of Valencias were to-day placed at auction. Lemons inclined a little more in favor of buyers than for a week or two preceding, but market was not heavily supplied with choice to select, nor was stock of this description crowded to sale in undue manner. Limes were in increased supply and were offered at reduced rates.

Oranges—Valencias, $\frac{1}{2}$ box.	2 50@3 50
Lemons—California, select, $\frac{1}{2}$ box.	3 50@—
California, good to choice.	2 50@3 00
California, common to fair.	1 25@2 25
Limes—Mexican, $\frac{1}{2}$ box.	6 50@7 00

NUTS.

The Contra Costa Almond Growers' Association rejected the bids made last Saturday and will receive new bids on Saturday, the 31st. Most of the Davisville Almonds purchased by the J. K. Armsby Co. are reported already placed. Walnut market is practically bare. For a few No. 1 soft shell as high on 14 $\frac{1}{2}$ c is being realized in a small way. Prices for new are expected to open at about 8 $\frac{1}{2}$ c for No. 1 soft at primary points. Peanut market shows steadiness, with demand fair and spot stocks of moderate volume.

California Almonds, shelled.	18 @22
California Almonds, paper shell, $\frac{1}{2}$ lb.	12 @14
California Almonds, soft shell.	10 @12
California Almonds, hard shell.	6 @ 7
Peanuts, California, fair to prime.	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$
Peanuts, Eastern, hand-picked.	5 $\frac{1}{2}$ @ 6
Pine Nuts.	5 @ 6

WINE.

In the wholesale market there is nothing to report in the way of transfers of wine from first hands. Values for last year's vintage remain nominally as previously quoted—22@25c. per gallon for

dry wines. The wine dealers are now trying to fix prices for this year's grapes and intimate 20@23c. per gallon. These figures would undoubtedly be to their suiting, but there is every indication that prices will rule higher. Contracts have been already entered into at decidedly better figures. Those in a position to know assert that it is doubtful if it will be necessary to sell this season any good wine grapes for less than \$23 per ton, allowing 22 per cent. for the minimum proportion of sugar. For grapes running 22 to 28 per cent. sugar the market may be said to be quotable at \$23@26 per ton, with likelihood of higher values ruling in special instances.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{2}$ sacks.	121,631	715,553
Wheat, centals.	19,590	465,040
Barley, centals.	37,145	330,150
Oats, centals.	6,600	130,481
Corn, centals.	840	12,475
Rye, centals.	1,300	5,355
Beans, sacks.	2,634	15,561
Potatoes, sacks.	24,858	160,712
Onions, sacks.	8,655	42,772
Hay, tons.	2,171	19,881
Wool, bales.	823	10,645
Hops, bales.	—	11

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{2}$ sacks.	89,372	491,592
Wheat, centals.	4,555	395,583
Barley, centals.	53	52,936
Oats, centals.	—	525
Corn, centals.	2,091	6,470
Beans, sacks.	151	687
Hay, bales.	302	610
Wool, pounds.	—	168,700
Hops, pounds.	852	14,240
Honey, cases.	—	469
Potatoes, pack's.	1,163	6,809

California Dried Fruit at New York.

NEW YORK, Aug. 21.—Evaporated apples, common, 5 @ 7c; prime wire tray, 7 $\frac{1}{2}$ @ 8c; choice, 8@8 $\frac{1}{2}$ c; fancy, 9c. California Dried Fruits.—Market is rather quiet, but firm at the quotations. Prunes, 3 $\frac{1}{2}$ @ 7c. Apricots, Royal, 8 $\frac{1}{2}$ @ 13c; Moorpark, 9 $\frac{1}{2}$ @ 14c. Peaches, unpeeled, 7@9 $\frac{1}{2}$ c; peeled, 11@15c.

## GLENN RANCH,

Glenn County, :::: California,

## FOR SALE

In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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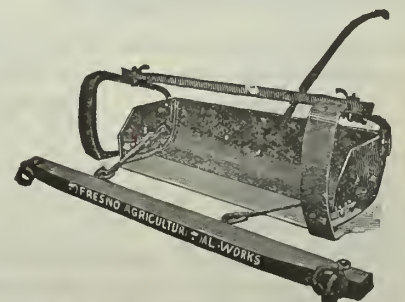
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FRESNO, CALIFORNIA.

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SINGLE AND COMPOUND.  
BURTON PUMP & MACHINE WORKS,  
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### The Locomobile.

The locomobile is a self-propelling carriage which is, as its name would suggest, its own locomotive. It is operated by steam generated in a boiler used in an engine. The boiler, engine, fuel, gasoline and water tanks are all compactly secured to the bottom of the vehicle and to the running gear. The complete result is the exceedingly handsome and useful types of road wagon called by the makers the "locomobile," half-tone views of which are shown here and on the first page of this journal.

The special characteristics of the locomobile are lightness of structure, and speed, economy and simplicity of operation. The water in the boiler is converted into steam by heat from burning gasoline vapor. The gasoline is carried in a copper tank and forced by compressed air through the boiler, where it is vaporized to the burner underneath where it is ignited. The operation is very simple. The operator sits on the right hand side of the carriage, with his left hand on the steering gear. With the right hand the throttle lever is pushed forward slowly. This admits steam to the cylinder and the carriage starts. Speed is increased by pushing the lever forward. The carriage is reversed by bringing the throttle lever to its original position and the reversing lever then thrown back; the steam admitted to the cylinders by the throttle lever reverses the motion of the carriage. To stop the carriage, shut off steam and apply brake. On average roads a tank of gasoline will operate 40 miles, and 20 to 25 miles are made with one tank of water. As high as 40 miles an hour rate of speed can be had.

The illustrations are of locomobiles in use for pleasure riding. Their appearance in parks, streets and country roads is ceasing to be a novelty, with the rapidly increasing number coming into use. Experience with them is proving that they cost to keep less than a horse, are safer and more comfortable.

The carriages are manufactured by the Locomobile Co. of America, with office at 11 Broadway, New York. The Locomobile Co. of the Pacific, the Pacific coast representatives of the manufacturers, has its office and warehouses at No. 1622 Market street, San Francisco, Cal.

### Hop Harvest at Hand.

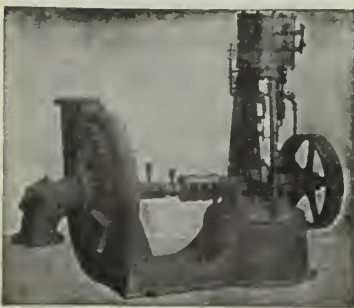
The hop picking season in northern California is now well under way, and by the latter part of next week all the yards will be working full crews. In the yards of Mrs. Ella F. Merkeley and A. Mouton, on the Riverside road, and A. Menke and Horst Bros., in the American river district, picking commenced yesterday. George Menke of Routiers commenced the harvesting of his crop last Monday, and Charles Merkeley of the Monument ranch, up the river, will begin operations next Wednesday. In the vicinity of Wheatland, where an immense acreage is devoted to hop growing, the harvest is in full blast, and Wednesday nine carloads of Japanese left here for the fields in that district. Recently a number of men reached this city from San Francisco and were immediately taken to the Horst ranch, near Perkins, where they will begin picking. They stated that they were San Francisco teamsters, who were unable, by reason of the strike in that city, to follow their vocations, and, seeing little prospect of an early settlement of the labor troubles there, had sought the hop fields for employment.—Sacramento Bee, Aug. 16.



Locomobiles in Automobile Club Run at Sutro Baths, San Francisco, Cal.



Locomobiles in Golden Gate Park, San Francisco, Cal.



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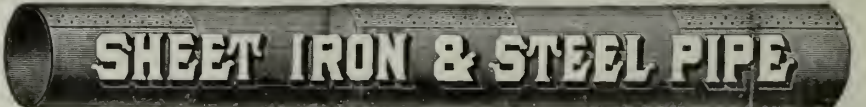
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CHICAGO. NEW YORK.103-105 MISSION STREET,  
SAN FRANCISCO, CAL.**THE STOCK YARD.****A Cheap Silo.**

The severe Eastern drouth which has played such havoc with the corn crop that many fields will not be worth husking suggests Prof. Plumb of the Experiment Station at Lafayette, Ind., that it is an appropriate time for farmers to build silos and fill them with green corn. They thereby secure palatable, succulent food for winter use, or during drouth. At this time no better use of the corn crop can be suggested.

A silo can be built without great expense or trouble. The Indiana station has just constructed a silo that holds about sixty-five tons. It is 12 feet in diameter and 28 feet high. Studs 16 and 12 feet long of 2x4 pine were placed vertically end to end, long and short alternating to break joints, and 17 inches from center to center, on a circular brick foundation, two layers deep. No. 1 pine fencing, 1 inch by 6 inches by 16 feet long, was then resawed to make boards 1/2 inch by 6 inches and 16 feet, and these dressed to make them lay true. These were then nailed around on the inside against the studs, forming a circle, two men binding them into place and nailing on. First one layer was nailed up for a space, then tarred paper was laid over this layer, and this was followed by another layer of 1/2 inch stuff, breaking joints with that underneath. Four doors were left at convenient intervals, the width between studs and about 18 inches high. Boards and tarred paper may be laid in the doorways, the ends lapping against the studs, when the silo is filled. No roof is provided or necessary.

Such a silo is strong and inexpensive and will preserve the contents in good condition. This one cost, without boarding the outside of the studs, slightly under \$60, not including labor. Lumber is said to be high-priced in Lafayette, so the cost would be much less in many places.

The silo is simple of construction and may be built by any good farm laborer. It will be well for our American farm economy if more silos are constructed and stricter economy is followed in saving crops, and more especially the corn plant.

**CEREAL CROPS.****The French Will Need Wheat This Year.**

Consul Skinner at Marseilles advises the State Department that the French wheat crop began to be harvested June 29, which was considerably earlier than usual, and on July 12 three-fourths of the entire yield had been cut—that is to say, the harvesting has been practically completed about the time when it usually begins. It is no longer doubtful that there will be a very serious shortage, and that the country will become again an importing nation. The expectation of those who have given the matter study based upon previous experience is that France will be obliged to look abroad during the coming year for perhaps 56,000,000 bushels, including the hard wheat not produced in this country and usually imported for semolina manufacture from Russia and Algeria. Of the total importations, probably 32,000,000 bushels will be entered through the port of Marseilles, of which one-third will consist of hard macaroni wheat, such as cannot be supplied by the United States, at least for the present. This leaves about 20,000,000 bushels of soft wheat required for this port, the most of which will certainly be forwarded from the United States, if prices so adjust themselves that Russian wheats are not lower. Soft wheats entering Marseilles, other than those from the United States, come mainly from the Black sea region. Reports from the country southeast of the Azof are very unfavorable to a large yield, but the prospects from the southwest of the Azof are considered good. Already at least one cargo of American wheat of the new crop is on its way to this port and has been sold in small lots to about fifteen dealers, purposely, in order to disseminate practical information as rapidly as possible concerning the real quality of the new crop, upon which they will probably depend to an important extent. The importers hope that the Americans will not force prices to a point that will abnormally strengthen competition from Russia, and anticipate that the business of the year will be comparable to that of 1898, when the French crop was also short and large quantities came in from the United States.

**California is Getting Richer.**

The reports of assessors in the various counties of the State have all been received by the State Board of Equalization. Some of the county auditors, who give the figures after the County Boards of Equalization have acted, including San Francisco, have not reported, but the total valuation will not vary greatly from the figures furnished by the assessors. These figures give the total valuation of the State, exclusive of railroads assessed by the State Board of Equalization, as \$1,195,902,494—an increase of \$25,321,792 over last year, in spite of the fact that church property is this year exempt. The total church property exempt from assessment in the State, however, did not amount to over \$3,500,000. The total figures have not been received, but those at hand prove that the total will be but little over \$3,000,000. The increase in valuation last year over the year before was about \$23,000,000.

The only counties to show a decrease this year are Colusa, Glenn, Mendocino, Merced, Mono, Plumas, San Diego, San Joaquin, San Luis Obispo, Santa Clara, Solano, Stanislaus, Sutter and Yuba, and the aggregate of loss in these counties is but \$1,890,572. Santa Clara's decrease is due largely to the loss of the Stanford assessment, including the Palo Alto farm, exempted by the last Legislature. Kern is the banner county, showing an increase of \$5,872,109, due to the oil developments in that section. San Francisco also shows an increase of over \$5,000,000, Alameda over \$4,000,000 and Los Angeles over \$3,000,000.

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## FRUIT MARKETING.

### The Coming Prune Crop.

Special agents of the California Cured Fruit Association have just made returns on the estimate of the crop about to be harvested and give the yield of prunes for the entire State this season at about 55,000,000 pounds. The figures for Santa Clara valley, extending from San Francisco southward to Hollister and the Salinas valleys, are put at 24,000,000. The comparison with last year is significant. The total crop last season has been variously estimated at from 168,000,000 to 174,000,000 pounds. The yield from this valley was put at 101,000,000 pounds. These figures are the most accurate that can be obtained and the estimates are only returned after a detailed examination of every orchard in this valley has been made. The figures are below some previous statements, but the Association experts believe that the yield will not be a single pound more and that if there be any deviation it will be in a falling off from the estimate just given. In the words "this valley" is included the whole of district No. 3, including the entire district from San Francisco south as far as Hollister and the Salinas valleys.

**FRUIT IN HAND.**—Careful computations give the total amount of fruit now in the hands of the Association from last year at 38,000,000 pounds. Summing up, there is in sight an available prune supply for the State of California, including reserves and coming yield, of about 93,000,000 pounds.

Of the coming crop the Association will handle on the basis of last year about three-fourths, or about 41,000,000 of the estimated crop of 55,000,000 pounds.

These figures are presented after the most painstaking efforts on the part of the Association to ascertain the exact conditions of the prune situation. The estimates previously made have fixed the coming crop at about a fourth of last year. The returns made by the inspection of the special examiners are slightly better; the yield will be nearer one-third.

The prune harvest has begun, and along the foothills on the West Side picking is under way, and if the demands needed it the new crop could be put on the market within thirty days. In the lower portions of the valley and about the city of San Jose drying will not begin for at least two weeks.

**ASSOCIATION DIVIDEND.**—The Board of Directors has passed a resolution ordering that \$300,000 be distributed to the members of the Association immediately. This payment will make a total of \$1,484,000 in round numbers paid to the members.

The Directors after being in session two days, adjourned. The officers and members of the board were cautious about making any statement, though it was agreed that the session had not only been harmonious, but highly satisfactory. The directors, without a single exception stated that the outlook was far and away more encouraging than it had been at any time since the organization of the prune growers. No

official details of the proceedings in the board were made public, but when adjournment was taken a spirit of elation and cheerfulness was manifest.

### The Latest About the French Prune Crop.

Special Consular Report received by the Pacific Commercial Museum of San Francisco.

I have sent you (see PACIFIC RURAL PRESS of Aug. 17) a cable, giving a reported sale of this year's crop of prunes. As before reported, the estimates have been too varied to be relied upon. Three days ago one of the largest English exporters assured me that the crop was "nothing—a few big ones for New York and London and nothing else—not one-third of a crop." I had heard this so often that I did not believe it.

The greater part of the prunes in this Consular district are produced in the Department of Lot-et-Garonne, and in the valleys of the Lot and the Garonne. The harvest of last year was a very good one, both in quality and quantity. The amount of it is yet in doubt. The minimum estimate is 800,000 quintals (cwt.); but there are many who contend that it amounted to 1,000,000 quintals (cwt.) or more. In addition to this, there were imported from the United States about 500,000 quintals. How much of last year's crop, native or imported, is yet on hand, is a question quite as difficult to determine, and, as you will see, not less important than the size of the present crop. On July 27 sales of the old crop were reported as follows:

	Per 110 pounds.
45 to 50 .....	\$6 85
55 to 60 .....	5 60
65 to 70 .....	5 21
75 to 80 .....	4 82½
85 to 90 .....	4 63
95 to 100 .....	3 96
115 to 120 .....	3 09

Comparing these with the cabled advance sales of the new crop (see last week's PACIFIC RURAL PRESS), you may be able to reach some conclusion as to the general opinion on the subject of prune values in this market this year.

**A SPECIAL INVESTIGATION.**—Determined to get the best obtainable information, I sent this week a trusted observer to look up the prune crop in the prune growing region itself. He was absent two days and thoroughly covered the ground. To avoid suspicion, he assumed the role of an English dealer come to look around before buying. From his report, I gather the following facts:

1. The wet weather and the fog since my last report have seriously injured the crop and if continued will injure it much more.

2. The average of a large number of expert opinions of growers and dealers was that the crop of 1901 will be 25% less than last year's, say 580,000 to 610,000 quintals (cwt.). The newspaper reports put it at 400,000 to 500,000.

3. The size of the fruit is unusually large. It is reported that there will be but few of the smaller grades. All fruits are of unusual size in this region this year. Many trees are without any of the smaller sized fruit.

4. The quality, of the larger fruit especially, is not regarded as equal to last year or to ordinary good years. It seems to be watery, hard, not ripening evenly and of inferior flavor.

Some of the wormy fruit, windfalls, etc., being of large size, is reported by the press as being prepared for the market now, though the crop will not be fully ripe for three or four weeks yet. This, then, is the situation:

1. If the weather keeps dry, as it has been for some days, the crop will be 25% off last year, but of unusual size and fine appearance.

2. If the weather turns out foggy and wet again, the crop will be small, perhaps not more than half that of last year, the fruit large but of doubtful quality.

ALBION W. TOURGEE,  
U. S. Consul.  
Bordeaux, France, August 2, 1901.

REGARDING the cost of cultivating wheat in the Middle West, a driver of binders gets \$1.50 per day; \$3 is paid for the horses and 30 cents per acre is spent for binding twine. A binder in the Mississippi valley will cut about fifteen acres per day, making the average cost of running a binder there \$9 per day. The expenses on 1000 acres of wheat would be about \$600, exclusive, of course, of the planting. The plowing of a field costs \$1 per acre. To drill the wheat in the ground costs 10 cents per acre, while seed wheat there costs a cent a pound, forty-five pounds being used to the acre.

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING AUGUST 6, 1901.

679,932.—VENTILATOR—P. Abramson, S. F.  
680,106.—SKIRT SUPPORTER—A. M. Adams, Portland, Or.  
680,113.—MOUTHPIECE—A. Bergman, Sacramento, Cal.  
679,875.—CONVEYOR—H. W. Blaisdell, Yuma, Ariz.  
683,119.—DENTAL FORCEPS—F. A. Brewer, Jr., Watsonville, Cal.  
679,942.—PENCIL SHARPENER—E. Burke, Lakeview, Or.  
679,943.—PRESERVING FRUITS—F. Butcher, Healdsburg, Cal.  
679,886.—RAILWAY SWITCH—Cantrell & Empey, Spokane, Wash.  
679,946.—FLY ESCAPE—A. J. Collar, Yreka, Cal.  
679,951.—REIN HOLDER—C. A. Conger, Oakland, Cal.  
679,889.—BAILER CONNECTION—C. I. Dorn, Bardsdale, Cal.  
680,029.—LUMBER CONNECTION—J. E. Dubray, Madera, Cal.  
680,141.—DRYING SHINGLES—Gibbard & Anderson, Eureka, Cal.  
680,038.—MOTOR—K. Gore, Berkeley, Cal.  
680,039.—WINDMILL—K. Gore, Berkeley, Cal.  
670,144.—CLEANING COMPOUND—J. Hammer, Tacoma, Wash.  
679,962.—SLIDING DOOR—J. Handschumacher, S. F.  
679,966.—REFRIGERATOR CAR—J. Hommel, Los Angeles, Cal.  
680,155.—LUBRICANT—W. M. Jones, S. F.  
680,053.—JAR COVER—Madigan & Crocker, Seattle, Wash.  
680,175.—GAME—M. Reinhart, Portland, Or.  
680,044.—REFRIGERATOR—J. R. Simms, Linden, Cal.  
680,045.—HOOK—P. B. Southworth, Mayville, Or.  
679,928.—TEA KETTLE—C. E. Warren, Los Angeles, Cal.  
680,104.—DESK LEAF SUPPORT—G. H. Wyman, Los Angeles, Cal.  
34,887.—DESIGN—J. A. Kirkham, Portland, Or.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**MEANS FOR PRESERVING FRUITS AND THEIR JUICES.**—F. Butcher, Healdsburg, Cal. No. 679,943. Aug. 6, 1901. This invention is designed to prevent the decay or fermentation of the juices of fruits or of fruits or kindred products in a liquid or semi-liquid form after these products have been hermetically sealed, and where it is desirable at any time to break the seal and remove a part of the preserved contents. My invention consists in a means for sterilizing or deodorizing the air or vapor that may be emptied to the barrel, or other receptacle containing the preserve, whenever any of its contents are removed, and this is effected by consuming the oxygen of the air and sterilizing it as it enters the vessel to fill the vacuum produced by drawing out the contents.

**FLY ESCAPE.**—A. J. Collar, Yreka, Cal. No. 679,946. Aug. 6, 1901. The object of this invention is to provide an inexpensive portable fly escape that can be inserted in any screen door, or screen window opening, and requiring little or no mechanical skill to set it in position. It includes a horizontal expandable concave base having transverse openings or outlets, a screen surface with a transparent section or continuation, and means for attaching the escape to an opening or like aperture.

**VENTILATOR.**—Peter Abramson, San Francisco, Cal. No. 679,932. Aug. 6, 1901. This invention comprises a ventilator box or air shaft divided by longitudinal vertical partition into ingress and egress air passages, with means for deflecting the air respectively downwardly and upwardly in these passages. A damper forms a part or continuation of the said partition, and is turnable to cut off the circulation.

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## PATENTS

Our U. S. and Foreign Patent Agency presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, our Washington branch which tends exclusively to our business before the Patent Office, intimate acquaintance with the subjects of inventions in our own community, and our most extensive reference library, containing official American reports since 1790, with full copies of U. S. Patents since 1872. All worthy inventions patented through DEWEY, STRONG & CO.'S Patent Agency will have the benefit of a description in the *Mining and Scientific Press*. We transact every branch of patent business, and obtain patents in all countries which grant protection to inventors. The large majority of U. S. and foreign patents issued to inventors on the Pacific Coast have been obtained through our agency. We are conservative and counsel preliminary examinations in cases of doubtful novelty. Guide to inventors sent on request.

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The celebrated German physician Schweninger, who reduced Bismarck's weight nearly 100 pounds, invented the system which bears his name. It treats obesity from a different standpoint than that of diet alone. It aims to improve the condition of the heart and liver, which often have a tendency to disease in fleshy people. It has no cut-and-dried rules, as is the case with most systems, but is adapted to individual conditions. In some cases sugar and farinaceous foods are allowed in moderation, while in others they are strictly prohibited.

The great advantage of the Schweninger system over all others is that the reduction is permanent. The reason is that the axe has been laid at the root of the trouble and the diseased tendency to undue fat production has been fundamentally checked.

According to Schweninger, all watery articles of diet should be avoided as far as possible. Thin beef and mutton soups are allowed. Of bread and farinaceous foods only six ounces a day are permitted. These six ounces consist of gluten or stale bread or dry toast. Water may be taken in moderation between meals. Fat soups, sauces, spices, cereals, macaroni, sweet potatoes, pastry, puddings, pies, cake and milk are on the black list. Tea and coffee with milk may be used. For desserts, fruit is recommended, the preference being given to grapes, oranges, cherries, berries and acid fruits. In the matter of vegetables there is a wide range given—squash, turnips, asparagus, cauliflower, onions, celery, cress, spinach, tomatoes, radishes, lettuce and greens being permitted.

The only medicines given during the treatment are a few drops of a liquid preparation to be taken before meals.

This treatment is not one of self-practice and can only be undertaken under the guidance of a medical practitioner, after a thorough physical examination which determines the latitude in diet allowed, which is in turn dependent upon the condition of the vital organs. Exercise is made a factor in the reduction of flesh by this system. The patient is frequently made to climb hills or ascend and descend stairs daily a given number of times to improve the action of the heart. The general health is almost invariably improved by the Schweninger system.

Enough hints may be gleaned from the above to enable those who are verging upon the lines of unbecoming stoutness to keep within the desired weight.—Stella Stuart in June Ledger Monthly.

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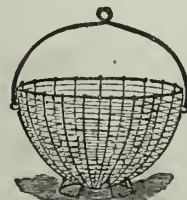
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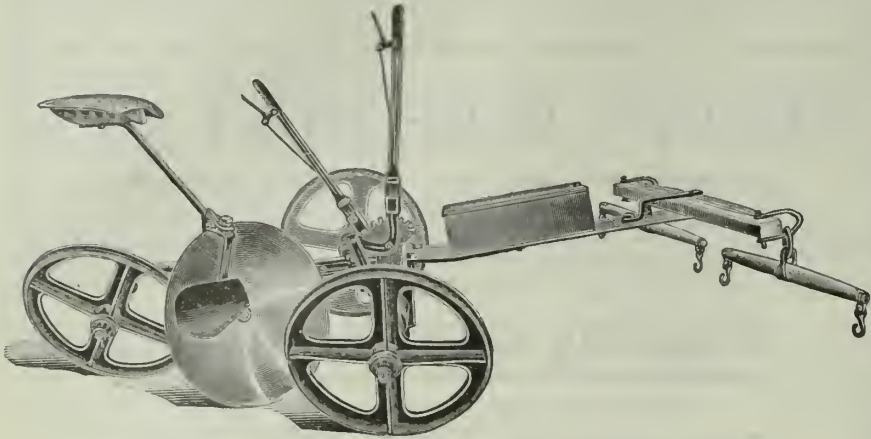
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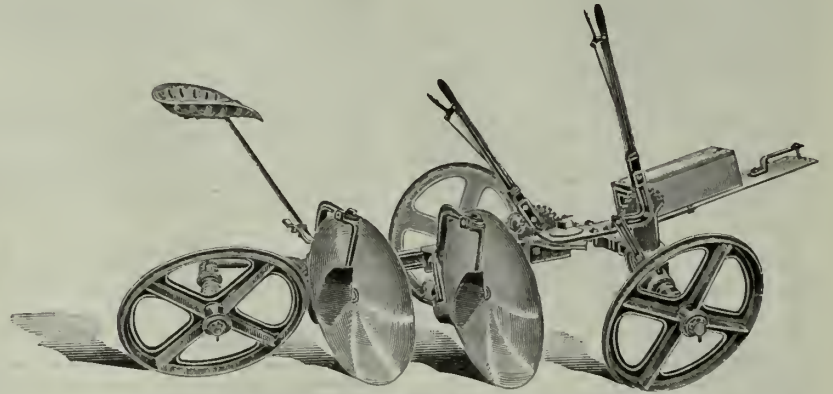
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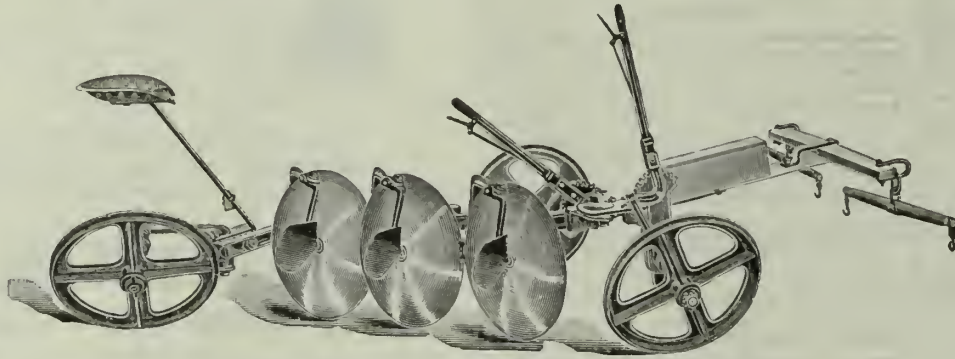
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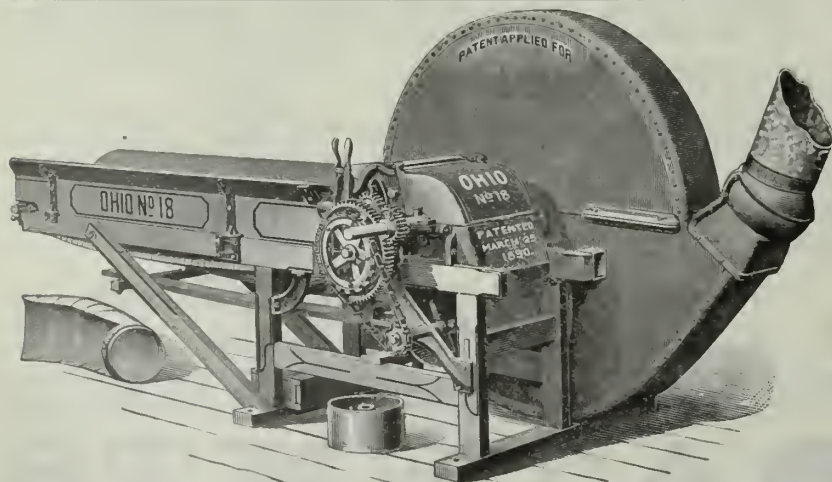
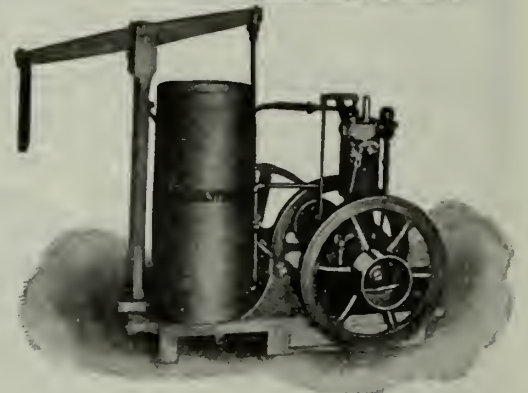
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 9.

SAN FRANCISCO, SATURDAY, AUGUST 31, 1901.

THIRTIETH YEAR.  
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### Silos at the Oregon Experiment Station.

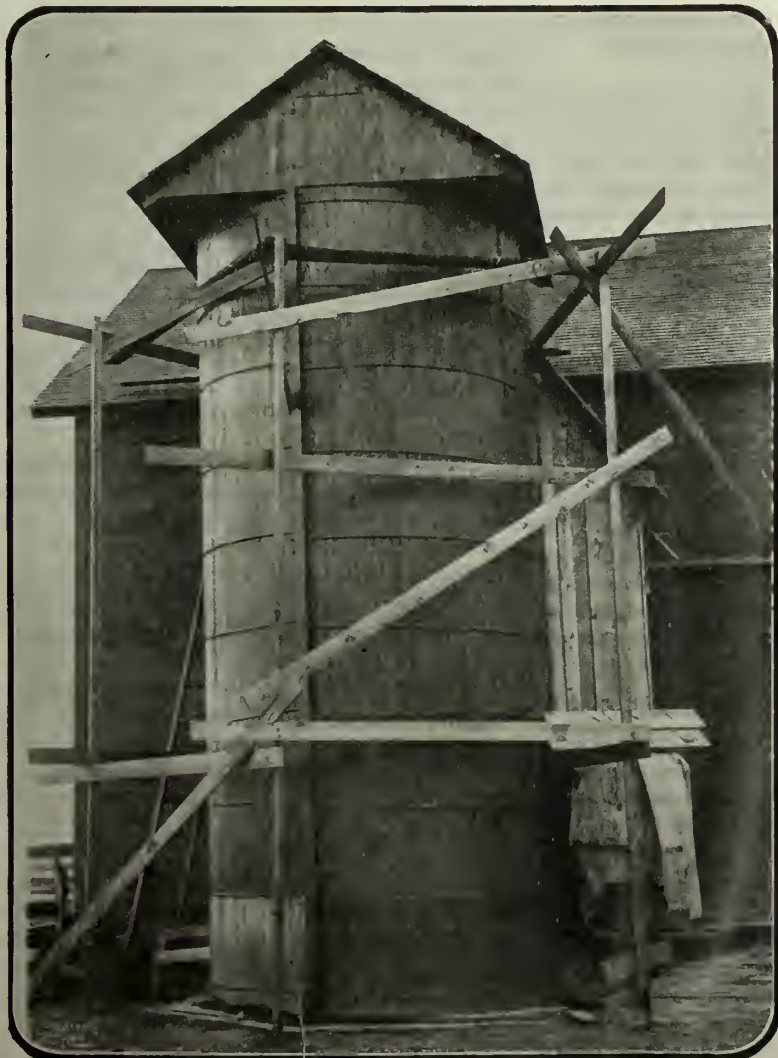
The Oregon Agricultural Experiment Station at Corvallis has been doing something in the construction and use of silos which may be interesting and suggestive to Californians. Dr. Withycombe, the vice-director, is a stock expert of high rank and is widely known in this State. He has just prepared a bulletin on "Silos and Silage" which gives a full account of the station tests and some additional advice from various sources. To secure silage for feeding experiments, of which we shall speak at another time, four moderate sized stave silos were constructed, two being 9 feet and two 10 feet in diameter. Each silo is 22 feet deep. Two by four-inch dressed fir lumber was used in the construction of these silos. In the 9-foot silos the two by fours were used with square edges. The staves of one of the larger silos were beveled so that they would fit snugly both at the inner and outer surfaces. The remaining silo was constructed with tongued and grooved staves. The two smaller ones and the one constructed with tongued and grooved lumber proved satisfactory, with results in favor of the latter. The one built with beveled staves was very unsatisfactory, as much of the silage in contact with the walls was spoiled, which was manifestly due to

the admission of air. This was largely attributable to faulty workmanship in making the bevel. In view of the marked preference in this State for silos of studs and boards, built according to the description given on page 125 of last week's PACIFIC RURAL PRESS, the success of these stave silos in Oregon is interesting.

In his discussion of the relation of stave and frame silos, Dr. Withycombe says that he considers the stave silo entirely satisfactory in his State for the average dairyman or farmer, but gives the preference to the frame silo where great strength and capacity are needed. Probably they do not have as great danger of neglected stave silos collapsing when empty in the dry season as we have in California. For foundations for stave silos, he says they are sometimes placed directly upon the smoothed ground, but a foundation of lumber is better and will probably prove as durable as the bottom portion of the staves of the silo. When lumber is used for the foundation, the ground should first be made level and well hammered down. Then lay 2-inch plank, placed as close together as possible, and cover this with 1-inch planks so as to break joints. A good foundation can be prepared with small rock or gravel. An excavation is first made from 4 to 6 inches deep, slightly larger than the contemplated silo. This is filled with



Stave Silo at the Oregon Experiment Station at Corvallis.



Stave Silo, Showing Arrangement of Scaffolding to Aid in Construction.

the rock, which is to be well hammered down, and the whole can be covered with a thin layer of well puddled clay. The best, and perhaps the most economical foundation in the end, is that of concrete.

To set up a stave silo, after the foundation is properly laid, it is best to erect a scaffold. This can be done by first setting up four 6x6 posts at the corners of a square sufficiently large to encompass the silo. To these nail securely 1x6 planks, horizontally, one near the bottom, one halfway up, and a third near the top on each side of the square. To these planks, at each angle of the square, nail 1x6 pieces so that the inner edge will just touch the staves when set up. Then place in position one stave and tack it to the 1x6 at the angle of the square. Care should be exercised to have the first stave perpendicular to the point where it rests upon the circle previously drawn on the foundation. As each stave is placed in position, it should be toenailed at the top. When a few staves have been placed, boards can be nailed across the top. They will serve both as a platform and as a support to the staves. To maintain a uniform circular outline during the time the staves are being put in position, an ordinary templet may be used. After the staves are all in place the hoops should put on, and

the templet removed. When slightly beveled, tongued and grooved staves are used, no templet will be required. Simply place the staves on the circle and toenail at the top.

Hoops for the silo can be made of any suitable material, such as  $\frac{1}{2}$ -inch,  $\frac{7}{8}$ -inch or  $\frac{1}{4}$ -inch round iron;  $\frac{1}{2}$ -inch flat iron, 2 inches wide, or wire. The size of the hoops are governed by the capacity of the silo. For a silo 12 feet or less in diameter,  $\frac{7}{8}$ -inch round iron will be sufficient. The round hoops are more generally used and give satisfaction.

It is estimated by King that the pressure from silage when settling, at the time of filling, increases with the depth at the rate of eleven pounds per square foot for each 12 inches of depth. At a depth of 10 feet the lateral pressure is 110 pounds per square foot; at 20 feet it is 220 pounds, and at 30 feet 330 pounds. Hence, the hoops should be larger and stronger at the bottom of the silo than at the top, or their strength be augmented by placing them closer together. The first hoop may be placed 6 inches from the bottom, the next a foot above this, and increase the space 6 inches between each hoop until the distance between them reaches 4 feet, which should be maintained to the top of the silo. A lighter hoop may be used toward the top, as the pressure from the silage is comparatively small.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, August 31, 1901.

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## The Week.

We are at the end of August and entering the borders of a new rainy season. Certain signs have already awakened the prophets and varying degrees of wetness are threatened very soon. The cooler air of the last week, the fog which at times has reached dropping density, and the sigh of the wind have led the apprehensive to note the approach of autumn and to remember that early September is sometimes quite damp. It is very desirable that such apprehensions should not be too quickly realized this year. There is a good deal of fruit still out and it is worth something now. Hay and grain are lying under the sky in unusually large quantities because of the disarrangement of transportation through the strike and people are less than usually prepared for rain. It is, therefore, some satisfaction to feel that it often takes a great deal of threatening to make a rain and that it would not be surprising if everything except the strike could be gotten in out of the rain, and if the strike should get wet through it would be rightly served. There has been, however, much rightly placed disappointment that heat and dryness have been too small in degree to favor the ripening and curing of the later fruits, and it would be of immense value to the State to have a dry September with plenty of water afterwards.

The struggle to keep things moving in the face of the strike is accomplishing something. One ship of wheat and barley and one of flour have been loaded and sent on, and a steamer has gone with part of its cargo of barley for New York. Spot wheat is steady, but there is little doing and options are dragging. Barley is steady and no option business at all. If ships could be handled at all briskly this would change notably, for there are forty ships on the engaged list, capable of carrying out 125,000 tons of grain. If these could be cargoes it would make up for past idleness, and they ought to be filled and dispatched, no matter whose fancied interest opposes. Oats are quiet, steady and unchanged. Corn is still too scarce to talk of. New crop beans are coming slowly from the river region; buyers are talking down, but there is no particular change yet. Bran and millfeed are still scarce, and the fact that the strike prevents inward shipments is bringing great hardship upon our dairymen. The cows will resent this and a possible milk famine will convince many more that the present condition of things is intolerable. Hay is unchanged and dragging because it cannot be handled. Beef is easier and slow

and so is mutton. Hogs are still high and no packing is being done. Butter is various, choice fresh is firm, but the market is hurt by receipts of delayed shipments, which have lost quality, and there is also some Eastern arriving. Cheese is moderately firm. Eggs are higher all around, but only the very best are firm under the advance. Eastern eggs are still coming. Poultry is doing fairly. Some geese and young turkeys have sold well this week. Potatoes are still booming for Eastern shipment, and onions are also stiff and higher. Some river growers are credited with having made almost incredible amounts of money. Good fruit is in brisk demand and hard to find. Lemons are quiet and limes have gone to pieces. Dried fruits are strong and nearly all kinds high. It is claimed that three-quarters of this year's dried peach crop has already been sold. Prunes are moving moderately and new crop prices are better. Hops are still dull and honey heavy, though shipments of the latter to Europe are progressing. Dealers' prices for almonds are below growers' views. Chile walnuts are selling high and the new crop of California should find good prices. As for wool, there is too little here to do anything with.

There is a rush on for prunes. The packers have refused to handle this year's crop of the Association and have started in to buy uncured prunes right and left from growers. It is telegraphed from San Jose that most of the growers in the valley have contracted their prunes green at prices ranging from \$22 to \$35. All of these have been purchased by members of the Packers' Company. This is in harmony with the growers' contract with the Cured Fruit Association, so that the latter will have no redress. If the packer who purchases the green fruit does not choose to deliver to the Association, the redress will be against him. Whether the contract can be enforced in law is uncertain. Meantime the Cured Fruit Association is pushing its warehouse at Santa Clara and the Packers' Company is involved in a lawsuit with a group of its own members which are alleged to have pocketed part of the yield of an adroit trade, thus turning to their own use what belonged either to the purchasers or to the producers of the goods involved. The whole situation, both between the Packers and the Association, and between each organization and its own membership, seems to be getting sadly confused, and it will take an army of lawyers and judges to straighten it out. It looks as though San Jose might need another courthouse more than another warehouse.

One question which is sharply imminent now is how far the contract which growers made with the Association for 1900 and 1901 will hold. Selling prunes fresh seems clearly to escape the contract. But other members of the Association are selling futures on cured prunes in advance of decision of a case now in the Supreme Court as to whether the old contract is of any value if not accompanied by delivery of the goods. This question seems now to lie at the foundation of any future life for the Association, and the president, F. N. Woods, said in an interview that until the Supreme Court shall decide whether Judge Seawell was right or wrong the Association was not in a position to determine just what to do with its contracts for this year. The situation is an extremely critical one, and it is to be hoped that the decision of the Supreme Court will be reached very shortly, as the time is now ripe for the delivery of prunes by the members, either to the Association or to outside parties. Meantime many are selling fresh prunes for a high price and cutting the legal knot in that way.

We are glad to believe that the current reports about the illness of Luther Burbank are somewhat overdrawn. The fair conclusion from such reports would be that Mr. Burbank is largely incapacitated, if not on the verge of actual collapse. The fact is that he is considerably worn by this summer's work, for it has been an unusually hard one. There seems to have been an unusual number of wise men among California's visitors this summer, a fact which local experts in all lines have discovered. Mr. Burbank has had his full share of inquiry and investigation by them, and it is quite a drain upon nerve force. He has also had an unusual amount of close observation

to make upon the many and strange things which have come into existence at his summons. He has also undertaken a striking exhibit at the Pan-American Exposition which required much effort and discrimination. After all these Mr. Burbank was very tired, as he has a right to be, and his physician sent him into exile for a few days at a rest-joint or sanitarium, the effect of which we understand was quickly manifested and he is recuperating rapidly. This fact will be widely welcomed.

## QUERIES AND REPLIES.

### Friendly, but of Formidable Mien.

TO THE EDITOR:—While picking peaches to-day, I discovered to my horror a kind of bug or a scale new to me. I have cut some bark from a tree, showing them just as I found them, and a piece from a peach with three bugs on it. Will you name the insect and give me its habits, and, if destructive to the trees, a way to kill them? Very few are on the fruit, but they are very plentiful on the large limbs; I have not seen any on limbs less than 1 inch in diameter on the lower side, and always, you will notice, they are something of the nature of a blood-sucker—very hard to brush off the tree.—A. B. SMITH, Campbell.

We do not wonder at the terror of our correspondent over the discovery, for the insects are of very formidable aspect. We are glad to assure him, however, that, from the orchardist's point of view, they are beautiful and beneficent. They are the pupa forms of one of our quite common ladybugs, *Exochromus pilatei*, commonly called Pilate's ladybug. It has credit for feeding upon black scale, and probably takes a wider range among young scales and plant lice. It resembles the twice-stabbed ladybug, but is larger and has the rear part of the under side of its body black, while the twice-stabbed is reddish in that region. It can be readily recognized by the two large, reddish spots upon its shining black wing covers. Probably our correspondent would not have been so alarmed had he seen the perfect beetles which have these marks, but he happened to find the pupae. The larva is light colored and covered with spines, which give it a formidable porcupine appearance. When it is fully grown it attaches itself to the bark, and soon the larval skin splits along the back and exposes the pupa within. This is the form which our correspondent found, and it is difficult to brush from the bark, not because it has a sucker, but because the insect protects itself during its dormancy by a strong attachment. In a few days the beetle emerges from its coverings and begins a free life on the tree. If Mr. Smith looks now he will probably find the cases empty and the red-spotted black beetles foraging around the trees for acceptable food and freeing the tree from scale and aphid pests to the extent of its appetite. Of course, all forms of this insect should be cherished and not destroyed.

### The Peach Moth.

TO THE EDITOR:—The late crop of peaches, which will be ready for marketing within the next two weeks, will be affected somewhat by the worm of the peach moth. In some places the effects will be of considerable consequence. Would you advise a spray? How will the kerosene emulsion answer at present? If advisable to use it, how would you suggest that it be prepared for use at this time?—GROWER, New-castle.

According to our present knowledge of the subject we do not think there is any practicable application for the peach moth when the fruit is so nearly matured. Probably a number of the larvae which are wandering about on the tree and finally conclude to strike the peach near the stem might be caught in a thorough spraying with kerosene emulsion of the ordinary strength. The question would be whether one can use coal oil upon fruit so near ripening without interfering with the aroma of the fruit. It would be certainly worth while for you to try a tree or two with this application, so as to compare the results with a tree of the same variety near by which is not sprayed. Note whether there is any ill effect from the kerosene; also whether the use of it gives you a fewer number of injured peaches. We are not aware that such an experiment has yet been made. Insects entering the fruit, as the larva of the peach moth does, are usually successfully met by the use of Paris green, and Paris green is found to be safe with apples and pears. We doubt whether it would be safe to use the Paris green on the peach because of the danger when applied so near to the ripening that



much of it might be retained in the furry coat of the fruit and in that way render it dangerous to the consumer. If you wish to try a tree with Paris green, and will send a box of the fruit when it is duly ripened after such a spraying, to the agricultural department of the University at Berkeley, they will make a chemical test to determine whether any of the poison has been actually retained. In using Paris green on the peach, one pound to 300 gallons of water is as strong as the foliage will stand. In spraying with the kerosene emulsion, the effort should be to reach all the twigs and branches of the tree, so as to catch the larvæ while they are wandering about. In the case of Paris green it is not important to do this, but rather to reach so far as possible the stem ends of the fruit itself.

#### Paste for Aphis on Young Trees.

TO THE EDITOR:—I send a sample of apple twigs infested with an insect very destructive to young trees in this section. What treatment will check it? Are not the Muir and Wager peaches generally considered identical?—READER, Carrville.

The insect on the apple twigs is an aphis, or leaf louse of the apple. This insect usually collects on the new growth and is especially injurious on nursery or young orchard trees. It can be readily killed by kerosene emulsion, soap wash, etc. Mr. W. H. Hannibal, of Agnews, informs us that he has succeeded admirably in killing aphids of this kind on young trees by bending down the tips of the branches and dipping them in a bucket containing a thin flour paste. This paste incloses the insect on drying and soon scales off, doing the tree no injury. This same proposition was once proposed as a treatment for scale insects, the trees being sprayed with thin paste, but it was found that the paste was not tenacious enough to peel off the scale. For free insects, like the aphis, it works well and may be serviceable as a handily made and safe treatment for insects occurring in masses on the tips of branches easily reached as are nursery or young orchard trees.

The Muir and Wager peaches are probably either identical, or the Muir is a seedling from the Wager, the Wager having the habit of reproducing itself quite true to the type from its seed.

#### Tomatoes in California.

TO THE EDITOR:—Is there any published account of California tomato growing? Are tomatoes grown with irrigation equal to those grown in localities not requiring irrigation?—READER, San Diego.

A statement quite in detail concerning California practices with the tomato is contained in our book, "California Vegetables." By far the greater part of the California tomato product is grown without irrigation, because there are very large areas of naturally moist lands which can be used for this purpose. It is, however, perfectly practicable to grow tomatoes with irrigation, providing proper care is taken not to give the plants an excess of water. Such excess stimulates the growth of the plant at the expense of the fruiting, and over-irrigated plants, therefore, cast their blossoms for a long time, but finally will set some of them. After the fruit is set excessive irrigation makes it too large and watery. Just the proper amount of moisture (it matters not whether it comes from rainfall or irrigation) results in a dense, meaty tomato, which is essential for the market and for canning.

#### Johnson Grass Once More.

TO THE EDITOR:—Find enclosed samples of Millet grass. I should like to know if there is anything that can be used to destroy this grass. It was sown for provender and it is spreading so badly that it has begun to be a dreadful pest. Would salting kill it? What effect would it have on the trees if I used enough salt to kill the grass?—ORCHARDIST, Penryn.

The specimen which you send is Johnson grass, one of the most serious pests that has ever gained introduction to our fruit districts. It is exceedingly difficult to eradicate. The best way to proceed is to plow up at this time of the year, allow the ground to dry thoroughly (providing it is not a clay which bakes hard on drying) and then rake out all the roots which can be collected. An ordinary horse hay rake works well for this purpose. Gather and burn all the roots that can be gotten out from the soil. When growth starts again from the roots which are overlooked, begin cultivation with a flat tooth cultivator or weed cutter, cutting off all shoots beneath the surface of

the ground and repeat this cultivation at short intervals so that the plant can make no new top growth. This will require cultivation once a week or ten days. The secret of success lies in smothering the plant, never allowing it to have the benefit of contact with the atmosphere. It is a long and expensive process, but none other seems to promise any success. It is impossible to make any application of salt or other chemical substances which will be injurious to this plant without killing trees or vines, or rendering the soil unfertile to any other plant until the salt is washed out by rain or irrigation. It has been found by experiment that salt enough to kill the plant will render the soil unfertile for three following years, even in a region where the soil is loose and there is ample rainfall. At the same time, although the task is difficult it must be undertaken, for this plant will render the ground nearly valueless for orchard or vineyard purposes. The only alternative seems to be to get the plant out or to sell out.

#### Meadow Grasses.

TO THE EDITOR:—Is the Hungarian Brome grass of the same nature as Johnson grass? Is Meadow Fescue or English blue grass adaptable to this climate on damp, loose soil? I find that Hungarian Brome grass costs \$7.20 to seed per acre and Meadow Fescue costs \$3.50 per acre. Do you know any reason why the Meadow Fescue should not be chosen? Would you mix anything with Italian rye grass or plant it alone on rich moist sandy soil to obtain a five-years' stand for hay and pasture?—READER, Santa Rosa.

Hungarian Brome grass is not at all like Johnson grass. It does not make running roots and cannot become such a pest as the latter. The Meadow Fescue has not been sufficiently tried in California to warrant one in undertaking a large sowing of it. It is satisfactory in some localities, but not in others. The Brome grass sowing is a better proposition, because it is more widely tried and found to live through our dry summer in all but the more arid soils. For this reason we do not think the grasses can be compared on the basis of the cost of the seed, for the Meadow Fescue might be the more expensive even at a lower cost, because of the lack of adaptation to the local conditions. We would advise the larger sowing of Hungarian Brome grass and a small piece of Meadow Fescue as an experiment. It is well to sow some English rye grass seed in connection with the Italian rye grass, for the perennial character of the Italian is not fully determined, and if it should give out soon, the English, which is thoroughly perennial, would occupy the field.

#### Lye Dipping Without Rinsing.

TO THE EDITOR:—I saw in a recent issue of the PACIFIC RURAL PRESS a question whether it is best to rinse prunes after dipping in lye. In answer I would say that a large part of the prune-dipping outfits sent out last year had no arrangements for rinsing. I dipped upwards of 150 tons last year for one of the most progressive growers, and we only used 1 to 1½ cans of lye to one of the largest-sized furnace tanks, and usually dipped from five to eight tons at a dipping. But we used the grader and sticker, and I do not think there were a dozen frog-bellies the whole season; we only used about 1100 6-foot trays to dry the whole crop on. We always made fresh lye each dipping. I know of many others with kettles and baskets who do not rinse, but always change the lye often. The dews, while drying as late in the season as this, give sufficient washing off of the lye for general use, if the dip is changed often enough. The lye should always be kept at boiling point, and the prunes should be kept in only as long as is necessary to dump them; then lay your boxes to one side and dump out the basket of prunes into the grader hopper or hopper and spreader which you use.—H. H. HUNTING, Lodi.

We are glad to have this statement. It is a speedy process and on the side of cheapening production. Anyone desiring to experiment with it should note particularly the frequency of freshening the lye, the heat and the rapid handling. We would like to hear further about the experience of others. Sometimes the quickest routes are not on all accounts the best.

#### Fasciation, Not Fascination.

TO THE EDITOR:—I send you a photograph, taken some time ago, of a freaky cauliflower plant which, instead of developing and heading regularly, made a flat stem about ½ inch thick and 3 inches wide, with little scales arranged in irregular rows across the flat surface. Is that what you call "fascination" in last week's issue?—READER, Amador county.

The phenomenon is the same in character in this

cauliflower plant as in the other instances of abnormal growth which we mentioned last week, but it is fasciation, not fascination. The printer must be credited with improving our manuscript by using a word more enchanting and alluring than we intended. Fasciated and fasciation are the proper words, being derived from the old Latin fasces—a bundle of rods, which we thought, when we first saw the error, would be very appropriately used on the printer aforesaid.

## WEATHER AND CROPS.

### Report of the U. S. Weather Service for Week Ending August 26, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

#### SACRAMENTO VALLEY.

The temperature has been several degrees below normal during the week, the weather clear, and conditions favorable for all ripening fruit except Tokay grapes, which are not coloring well, owing to cool weather. Late deciduous fruits are ripening rapidly, and a fair crop is being gathered. Prune drying is progressing; the fruit is of good size and quality, but the yield is below average. Oranges are in good condition. Almond harvest continues; the crop is heavier than anticipated. Hops are yielding a good crop. Beets, corn and vegetables are looking well. Grain harvest is practically completed, and thrashing is progressing rapidly.

#### COAST AND BAY SECTIONS.

The weather has been considerably cooler during the week, and somewhat unfavorable for fruit drying and maturing of the grape crop. In San Benito county the prune crop is much below average, but the fruit is of superior size and quality. Fruit will be a very light crop in Humboldt and Lake counties. Grapes are doing well, but at present the prospect is that the yield will be below the average. Citrus fruits are thrifty. Grain thrashing and harvesting continue. At San Luis Obispo grain is coming in at the rate of 40,000 sacks daily, and is piled up along the railroad track; owing to labor troubles in San Francisco, no shipments are being made. Bean canning has commenced in Lake county. Hops, beets and corn are in good condition.

#### SAN JOAQUIN VALLEY.

The weather has been much cooler than the week previous, the nights having been especially cool. The grain harvest is completed except in a few sections of the northern portion of the valley. Deciduous fruits are ripening rapidly. The canneries and driers are in full operation. Large shipments of fruit continue to Eastern markets and melons to the Northwest. The greater portion of the melon crop has been harvested. Grapes are making fine progress, and picking will commence in about a week or ten days. Sweet potatoes are being harvested, and will make a good crop. Hay is being shipped in large quantities. Water continues plentiful, and stock of all kinds are reported in good condition. Farmers are busy preparing for fall work.

#### SOUTHERN CALIFORNIA.

Slightly cooler weather has prevailed during the week, with fogs along the coast. Vineyards are in excellent condition, and grapes are ripening and becoming sweeter under favorable conditions. The berry crop is nearly all gathered, and deciduous fruits are being canned and dried. Melons are abundant. The orange crop in the vicinity of North Ontario will be lighter than last season's, but the fruit is reported in excellent condition. In other places the yield will probably be above average. Walnuts are looking well, and will yield a good crop. Beans, beets, corn and vegetables are doing well.

EUREKA SUMMARY.—Very warm weather continued throughout the interior. Apples, and fruit generally, are ripening rapidly. Vegetables promise a good yield. Everything is dry and rain is much needed.

LOS ANGELES SUMMARY.—Citrus fruits are in good condition. Walnuts are good, but some are sunburnt. Almonds are ripening slowly; harvesting begun. Beans and beets are doing well. Dry feed was injured in southward localities by rain. Wheat and barley are fair.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, August 28, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week.....	Minimum Temperature for the Week.....
Eureka.....	.00	.03	.67	.25	48
Red Bluff.....	.00	T	.05	.05	54
Sacramento.....	.00	T	.00	.03	52
San Francisco.....	.00	T	.03	.70	50
Fresno.....	.00	T	.05	.96	54
Independence.....	.00	.33	.08	.07	54
San Luis Obispo.....	.00	.08	T	.04	46
Los Angeles.....	.00	.06	T	.05	52
San Diego.....	.00	.07	T	.07	58
Yuma.....	T	.22	.02	.51	66



## THE IRRIGATOR.

### The Latest About Cultivation and Irrigation.

By C. R. PAINE at the July meeting of the Redlands Horticultural Society.

There are those who never plow their orchard ground, even on fairly level land; others plow in late autumn as soon as the rains permit, and again in spring, indifferent to the destruction of fibrous roots, to the depth of 8 or 10 inches. Practices vary greatly in stirring the soil after irrigation. Some non-resident proprietors and a few others permit the use of the harrow only, while most owners use cultivators, either the broad-toothed of poor penetration or those fitted with solid steel teeth  $\frac{1}{2}$  inch square, that may be carried, with sufficient power, to a depth of 8 inches or more. Some cultivate the way the water runs and once only after the irrigation. The greater number irrigate in two or three directions, according to the plan of the orchard, but do no more until after the next irrigation. Again, there are those—less than half of the whole number, I think—who repeat the work of cultivation midway in time between the irrigations, that is, about every two weeks.

**WHAT IS THE RIGHT PRACTICE?**—While different soils and exposures require different treatments, and while nature is kind in making more or less generous response to her devotees, whether lavish and wise in their attentions or not, yet it must be that, certain conditions and situations being given, there is one right way to do, for nature's laws are unchangeable. If any one were wise enough to point out the way and demonstrate it, there are few too wise in their own conceit who would not gladly follow it.

The industry of orcharding by irrigation in this country is yet too young to make plain the full injury or loss by wrong methods. Time may be the cure in this as in other things. The sharp lessons of dry seasons have been heeded. We look hopefully to the work to be done by our citrus experiment station to be for help in this as in other orchard problems.

Water controls the development of the country, and it is the part of wisdom to control the water.

The larger problem of union of effort to capture and control the winter rainfall of our mountain region—a problem we are bound to solve—attracts our attention more alluringly than the familiar one of careful and skillful use of what we have. The most convincing proof of the difficulty of the problem of properly applying and conserving the water lies in the fact that it has not yet been satisfactorily solved by the most intelligent class of people that ever undertook the cultivation of the soil, else, under like conditions, similar methods would be approved and used. It is not a reasonable criticism that these varying methods are correct because fair results have been obtained, that is, good crops have been raised. They may do as a general statement, but when it can be shown that in the same neighborhood where climatic conditions, exposures, soil character and water supply are essentially the same some orchards will have quite uniformly good crops and others frequent partial failures, the difference being due, apparently, to nothing else than different treatment. This is true when neither orchard has been fertilized. The one securing regularly, almost, the best results will hardly undertake to formulate the reasons, and he could not satisfy his neighbors if he should try.

'Tis plain that here is a matter calling for profound and continued study, but we fruit growers are all too busy with the actual work we think necessary in ways we have fixed upon to note with proper care influences and processes that determine results.

**IMPORTANCE OF MOISTURE CONSERVATION.**—The method of applying water beneath the surface by practical, permanent and not too expensive conduits has not yet been discovered. Were it known and of a feasible character, the subject of the conservation of moisture by cultivation would not so imperiously demand our attention, labor and means. Two-thirds of our applied water would not insensibly pass off into the air, and cultivation would be mostly for aeration and little for weed killing. Evaporation is a necessary natural process in plant growth, and, coincident with it and attendant upon it, is the upward passage of water from soil particle to soil particle, carrying in solution the needed elements to sustain and further the life of the plant through its rootlets. We cannot and should not completely obstruct evaporation, but, in an atmosphere but slightly humid and in regular daily motion, and beneath an ardent and unclouded sun, it becomes necessary to adopt the most efficient means of checking it. A covering of some sort prevents the escape of the precious fluid that otherwise will quickly and silently vanish. An artificial covering is not available except on a small scale, and we make of the soil itself a protecting mantle. By their own weight, in a dry condition and still more in a wet, soil particles become compacted, and closer contact makes easy their attraction for molecules of water, counter to the attraction of gravity. Warm air, especially when in motion, absorbs the topmost moisture and more follows after, to disappear in turn. We apply our hoes or horse tools and break the association of soil particles, mak-

ing a ruin of the stairway by which the water climbs to part company with the earth. How deep shall we break them down to find the foot of the ladder, how often will it be rebuilt, and how often shall we destroy it? Shall we have most regard to this work, or shall we be tender of the tissues of the roots that delight to spread themselves in search of sustenance in the saturated earth? Were we to put our supply of water in the deepest possible channels in a narrow strip midway between the rows of trees, the questions of disturbing the root system and providing adequately against the loss of water by capillary action and evaporation would be more easily disposed of.

**A SYSTEM SUGGESTED.**—A statement of orchard practice, well approved, in soil treatment on mesa lands is offered for discussion and criticism. A plowing following the early rains in such direction as to prevent washing is done to prepare for saving the winter rainfall, for loose earth will hold one-third more water than compact soil. The saturated sponge of the surface will gladly give up its moisture content by capillary attraction downward to the hard soil, which acts as a reservoir till the period of use.

During summer cultivation the water applied, the heat and aeration have conspired to set free plant food near the surface which the plow inverts to the root zone.

A destruction at this time by deep plowing of eight or more inches of surfaced roots has been judged by experienced growers non-injurious. In such a climate as ours the surface soil is of more value as a servant to the deeper layers and roots than as a constant home for surface roots; besides, their loss at the time checks further growth and allows a development on that already formed of larger and stronger fruit buds, which provides a regular annual insurance against a poor setting of fruit. Of course, if the winter season is too dry, the harrow is used to prevent evaporation, and cultivation, lighter than that of summer, may have to be done.

The growth of weeds, or a crop of legumes, and the tramping of men and teams with fruit-laden wagons make necessary a second plowing at the end of the season of rains. Lucky is the man who can forecast the weather and time his work so as to secure for summer use a surface fine and mellow and free from clods, for clods are so much useless soil.

This second plowing is in the direction of the water furrows of the irrigation period to follow; and if the early furrows were so made that the last cross them, the soil is cut and crumbled finer.

As drying at this season is rapid, harrowing to retard and secure a fine surface tilth follows close after the plowing. To avoid making a plow plan the depths of working should vary.

Great importance is attached to these double annual plowings as conservators of moisture. Many who have seen their good results, good in other directions also, which can only be hinted at in the discussion of tillage as a conservator of moisture, have been converted from the theory of cultivator work alone.

**THE TOOLS.**—There are some who continue the plowing in the summer or chief growing season, which cannot be accounted good practice, as also is not the work of those tools which turn up the soil at this season, mostly on account of the greater and more rapid loss of water they occasion by the coarse, loose mulch they make and the greater destruction of roots in active service.

The harrow and the narrow-toothed cultivator are the instruments that are pressed into almost ceaseless service for the succeeding six months or more of the highest activity of growth to get the greatest efficiency from the water of irrigation.

All soil-working tools have, of course, in their use a utility that cannot be precisely determined in promoting fertility of the soil and the health of what grows upon it. This feature of cultivation has received and demands scientific study, and the common observer knows much about it.

**ILL EFFECT OF NON-CULTIVATION.**—An occasional instance occurs to emphasize the effect of non-cultivation, as when a flume is removed from between rows of trees to give place to an underground pipe. The cultivation near the flume was difficult and far from thorough, and the trees took on a yellow and unthrifty look, though abundantly supplied with water. When the cultivation could be as complete as elsewhere, health and vigor returned.

One instance of this kind came to my notice a few days ago. From the underground pipe standpipes arose from which water flowed in as great amount and frequency as from the flume before, and leaching of the soil could occur as well. The former yellowness of the trees had disappeared under the regular cultivation. This was not on mesa land, but on a light, sandy soil that would seem, least of all, to need cultivation.

**THE HARROW.**—To resume from this digression—the tool that can be used the soonest after irrigation is the harrow, wide enough to cover the interspace in one round. It will scratch the surface and fill the water furrows, saving with little labor much moisture until the slower and more thorough work of the cultivator can be done.

Broad-toothed shovels of this latter tool have not

so deep penetration as narrow ones with the same power, and they leave ridges which increase the evaporating surface. Cultivator teeth that operate beneath the surface, as the harrow does upon it, make the finest and so the most desirable mulch. Their work thrice repeated at a depth of from four to six inches as soon as practicable after each irrigation, added to the work of the plow and harrow, constitute a system of intense tillage productive of grand results in growth and fruitfulness. Most soils require that the cultivation be renewed half way in times between irrigations. The depth should certainly be such as to stir up the silted bottoms of the furrows in which the water ran, unless a special tool performs this work before the general surface is covered.

## THE FIELD.

### Hay Growing in the Santa Clara Valley.

Hay is a common sort of stuff and there is not so much charm in writing about it as pertains to some other subjects, and yet hay is the greatest crop in California next to the output of fruit products, and should receive more attention than it does. We are glad to find that a writer for the San Jose Mercury has industriously sought information about the hay crop of the Santa Clara valley and writes interestingly about it. We shall borrow the parts which seem to us most widely important as showing characteristic methods of California.

**THE COUNTRY PRODUCT.**—The hay crop in Santa Clara county this year is variously estimated at from 60,000 to 80,000 tons. According to the assessor's books, there were returned a total acreage of hay in the county this year of 30,900 acres. In 1900 the acreage returned was 31,050.

Some well informed men on the hay crop, both growers and dealers, say the assessor's figures are always a little short, no matter how diligently his deputies do their work. One large grower and dealer gives it as his opinion that the acreage in hay in the county is nearer 40,000 than 30,000. He says that there were several thousand acres of volunteer hay in the valley, and, while this is not the best hay nor is the yield per acre the largest, yet the total is worthy of note. In the opinion of the gentleman quoted, a season such as that of this year will see a production of fully a ton of volunteer hay to the acre on much land, and on even the lighter lands a half ton to the acre.

**THE LOCAL DEMAND.**—Every indication points to a day not far distant when each acre of land capable of making hay must be devoted to that purpose in order to grow sufficient to supply the home demand. The great orchard sections of the Willows, Campbell, much of the West Side, and others to a smaller extent, now buy all their hay from some other portion of the valley. Many hundreds of tons annually from the Almaden road country are hauled into the Willows and put into the barns of the fruit growers. The East Side sends much to the Campbell and West Side orchard and vineyard grower. The production of hay in the valley now is as large or larger probably than it has ever been, though this is not a record crop, but the consumption is many times larger.

**CUTTING AND BALING.**—The process of cutting and baling hay is interesting, and it possesses more, perhaps, of that which is rural and agricultural than any other. When the hay is cut it is left for a few hours on the ground, the length of time depending on condition of ripeness and weather. Then it goes to the "windrows," and then into the "shock." A few days in the "shock" and—according to those who claim to know the best methods—then into the stack where it should remain about twenty-one days to "sweat," and then it should be baled, as it bales easier, more compactly, and makes sweeter, brighter hay. Frequently, however, it is never stacked, but stands in the shock until the baler comes along, and goes direct from the shock to the press. To leave it in the shock many weeks means it will dry out too much and be damaged, and often the grower, who would not otherwise do so, is forced to stack his hay while he waits for the baler to come. Stacking is done rapidly, a derrick being used to pile it high on the stack.

**BALING CREW.**—The baler is now in the fields, and he is the king bee of the hay ranch regions. There are six or seven men in the crew with the usual hay press, and from six to eight horses. Besides the hay press, there is a big camping wagon, a light water wagon, usually, and a buggy or cart for the "boss," or owner of the outfit. There are several different kinds of presses in use, but all the better class are similar. There is a box-like arrangement mounted on wheels. It is five minutes' work to throw this box forward, and then it is on the wheels and ready to take the road—a machine not so much unlike a wagon.

The press in operation is simple, but effective. Two men stand and with pitchforks throw the hay into the box, or press. Two horses are attached to a lever, and, when the word is given, the boy who sits



behind them on the lever starts them, and one circuit of the horses brings the powerful press down on the hay, and it is compressed into the shape of the ordinary bale. A man stands on the platform who removes the bales after they are pressed, weighs and tags them, with the weight in plain figures written on a little slit of wood. He also keeps the rope threaded into the press, and, after the pressure has been brought to bear, ties the ends of the rope before the bale is removed. All the work about the press is arduous and the men earn and receive good pay.

**REMOVING TO PRESS.**—If the hay is taken from the stack, one man and a horse with a sort of grab-hook or rake, made of iron, pulls it down and drags it to the two men, who feed it into the press. If it is in the shock, a man with one or two horses attached to a big wooden buckrake draws it to the press. The rake is pulled under the shock by the horse under the guidance of the driver, and it is lifted bodily and moved away. It is surprising to see how rapidly it is all done and how little hay is left on the ground. If needed, two rakes are kept at this work.

**CAMP OUTFIT.**—The camp wagon is fitted up as a kitchen and dining-room. Usually a woman—the wife of the boss or some man in the crew—presides. There is a good small stove, chairs, table and abundant dishes, knives, forks, etc., so that a thoroughly good meal is served and can be eaten in comfort. This camp wagon is a box house on wheels, 12 to 15 feet long and 7 or 8 feet wide. The lady who presides may be provided with sleeping apartments in one end.

The water wagon is filled with barrels and keeps an abundant supply of water for men and horses at hand.

**COST OF BALING.**—Ordinarily when the balers go to a ranch they charge so much per ton, "everything furnished them." This means that the rancher must provide food for all and the rope for baling. Sometimes the rancher may not be situated to feed the men, and it is then that the cook wagon comes into use.

The balers work from the time they can see in the morning until darkness forces them to quit. Then the horses are turned loose around the hay stack to eat until they drop down in their tracks to rest, supper is had, blankets are spread in the hay and the tired men sleep until breaking day calls them. A California hay baler would think himself everlastingly disgraced should he sleep in the house while out with a crew.

A good crew and press can bale from thirty to forty tons of hay a day. This has reference to the better presses. Some small and inferior presses will not do more than ten or fifteen tons, but these are seldom seen. A good press costs from \$500 to \$750. Labor is in demand and wages good this year. The men of the crew are getting from 15 to 18 cents a ton, wages. All get this except the boy who drives the horses, and he gets good wages. Usually the wages for the men is 12½ and 15 cents a ton.

Baling rope is worth from 8½ to 9 cents a pound this season, being cheap. Last year it was about 12 cents, and in 1898 and 1899 it was from 14 to 17 cents. It comes from Manila, and the war there was given as the cause for the high price. With entire peace in the islands and trade conditions settled, it is said the farmers will be able to buy their rope for 4 or 5 cents a pound. It takes from four to six pounds of rope to a ton of hay—not less than six pounds, if the better rope in proper amount is used.

The price of baling this year rules from \$1 to \$1.25 a ton, the owner to furnish rope and one team of horses, or \$1.50 to \$1.75 a ton, the baler to furnish all. The owner always feeds horses and men unless there is a special contract otherwise. Price varies very little among the balers, the charge depending somewhat on the amount of hay a rancher has to be baled. To move the press 2 or 3 miles and bale only a few tons costs the grower more.

**WIRE AS BINDS.**—For many years the San Francisco Hay Association practically refused to buy hay bound with wire, the end being attained by paying from \$1.50 to \$2 a ton less for wire-bound hay. This year the association has been sending out circulars advising hay growers to use wire, claiming that it costs much less. With rope at 10 cents a pound, wire at present price saves about 35%, but, of course, with rope down to 8½ cents a pound, as now, the saving is less. It is said that the reason the Hay Association advises wire for binding is that it is a safe bale to ship and the Government prefers it for the long journey in the ship's hold to Manila. Rope will often slip over the end of a bale in rough usage, but the wire cuts in and cannot slip.

**BALING SEASON.**—Hay baling begins as soon after the hay is cut as it is fit to work. If baled too soon it "heats" and spoils in the bale. The work continues right along until the crop is all worked up. Many ranchers bale all they have, even that which they intend to feed themselves, as they say it is much easier handled and housed and that it pays them to do so. It takes an immense space to house 100 tons of hay loose. In good crop years it is a rush to get the hay baled before the rain comes.

**OUTLOOK.**—While the crop this year is a good one, it is not a record crop, for in the last ten years there

have been larger yields and greater acreage. While prices, except in the dry times of two years ago, have been downward for the past ten years, this year's prices are, all things considered, fairly good. In the local market hay is selling to the consumer at about \$9 and \$10 for barley, \$10 and \$11 for wheat, \$8 to \$8.50 for oats, and \$6 to \$7.50 for volunteer. Local dealers are paying slightly under these quotations, and San Francisco dealers quote about the same "paying" prices. The top quotation for wheat in San Francisco is \$10.50 and \$9 for barley.

Great quantities of hay are being used by the army in the Philippines, and supplies are shipped from San Francisco, Portland and Seattle. Much timothy is shipped from Seattle. This demand will continue. The hay crop in all the Middle West is an utter failure. Farmers in Kansas are now in the market for hay and reports are that Arizona will find ready sale for every pound of her enormous alfalfa crop. This means that the growers of California will not have to face that hay. If the demand in Kansas turns out to be as much as local hay men expect, all the surplus alfalfa in the San Joaquin valley can find a market there. Eastern farmers are not accustomed to the wheat and barley hay and prefer the alfalfa. Some of the largest growers and dealers advise the farmers to hold their hay until after the first of the year, and predict that any good wheat or barley hay will bring from \$12 to \$14 per ton, and perhaps more.

## THE DAIRY.

### Filling the Silo.

It is timely to talk of filling silos, because the corn must be in condition for it. L. H. Adams of Wisconsin gives his latest conclusions to the Orange Judd Farmer, and, as Wisconsin is a State of many thousand silos, the information ought to be up-to-date.

**WHEN IS THE CORN READY?**—There comes a time when the corn is ready and just right to go into the silo, and that this condition does not extend over very many days, especially if the weather be hot and dry, as it is very liable to be at that time of the year with us, and the sooner the corn can be gotten into the silo the better.

To secure the best results, the corn must not be cut too green. If it gets too mature it will be equally unsatisfactory. If the weather is such that the corn matures naturally and the lower leaves on the stalks do not begin to dry up, I like to let it stand until the grain has passed the milk stage and is in the dough, and has commenced to dent. I recall one season, however, when we made a mistake by depending on the grain to indicate the proper time for harvesting. The late summer had been dry and the corn did not mature normally. The lower limbs became brown and dry before the grain had developed, and the result was that the silage made from this corn did not keep so well, there being more or less white mold through it. That which did not mold was as good silage as that made from a part of the field where the corn was put into the silo a few days earlier, before the leaves had got so dry.

I think, therefore, it is wise to push the silo filling along as rapidly as possible when it is started, for three reasons: First, it is the most economical; second, a better quality of silage is likely to result; third, the sooner the corn crop is out of frost's way the better. When the silo is filled rapidly it will be necessary after the silage has reached the top to allow it to stand for a period of two or three days to settle, then fill to top again. This will have to be repeated two or three times if the silo is to be left full after the settling has ceased. For a covering, our practice is to cut two or three loads of the greenest corn we can secure the last thing. If, in addition to this, the surface be well wet so that a layer of closely packed and moldy ensilage will quickly form to a depth of 5 or 6 inches, further loss will be avoided.

**DISTRIBUTE THE CUT SILAGE EVENLY.**—While the silo is being filled, a man should be there all the time to keep the face level, and especially to pack the silage next to the walls, where the greatest friction occurs in settling. If the silage be allowed to fall from the end of the carrier to the bottom of the silo, it will quickly form a conical heap, down the sides of which the heaviest parts of the silage will roll, and thus a separation of the coarse and fine portions of the silage will be effected. This should be avoided. To overcome this objection and facilitate the work in the silo, I had a flexible metal spout made that has been in use now for several seasons, and it works very satisfactorily. It is made of a series of round galvanized pipes that overlap each other 4 inches and are fastened one to the other by means of a snap and a few links of small chain on each side of every section. The snap engages a ring that is riveted to the lower end of the section of pipe next above, etc. These sections of pipe are 28 inches long, 10 inches in diameter at the small end and 11 inches at the other end. Enough of these sections are made to reach from the end of the carrier to within 4 feet of the bottom of the silo; the two sections next to the carrier are made gradually larger than the others,

and of such shape as to accommodate themselves to the end of the carrier. By directing the nozzle of this spout, the man in the silo is enabled to place the silage exactly where it is wanted, and, most important of all, the grain, leaves and stalks are distributed in the proper proportions.

After the silo is filled, the sides should be thoroughly tramped by a man each day until all settling ceases. As to the machinery for silo filling, it has now been developed to such an extent that no trouble will be experienced in obtaining a satisfactory cutter from among the large number of really good ones on the market. The main thing is to have plenty of reserve force and strength in this class of machinery if one would avoid delays and annoyances that result from insufficient capacity, breakage, etc. My cutter is driven by a 10 H. P. electric motor, and we cut the corn as fast as two teams can comfortably deliver it, by using three wagons. I have handled fifty tons in a day of ten hours at a cost for men and teams of about 40 cents per ton. This does not include the wear and tear of machinery.

**USE A GOOD CUTTER.**—I have two sets of knives for the machine and arrange to have a freshly-ground set put on during the noon hour, and again at night, so that there need be no delay, and for the additional reason that sharp knives not only save power, but also do a better job of cutting. Instead of tearing and pulling through long leaves, everything is cut fine and clear, and the silage settles and packs more closely. This in turn assists in more perfect preservation of the contents of the silo. In the field one man with team cuts and binds the corn with a harvester. It is taken up as fast as possible and placed on wagons with low racks. The two stringers in this rack are 4x8 inches, and either 10 or 20 feet long, as desired, swung under the front axle by a lengthened kingbolt provided with a nut and washer, and from the hind axle by ½-inch rods, provided with nut and washer below and hook above, which hang from the bolster. The stringers are 20 inches apart, outside measure, in front, and a short reach keeps the hounds from tipping up. To prevent the kingbolt breaking by twisting, it is sometimes made in two parts, the pieces being held together by eyes.

I prefer a variety of corn for the silo that will mature in the locality where it is grown. I plant in rows 3 feet 8 inches apart, and the stalks will average about 5 to 6 inches apart in the row.

### Sorghum Pasture for Dairy Cows.

During the month of July the Kansas Experiment Station realized \$8.20 per acre from pasturing sorghum, besides having the field left to produce a second crop. On July 1 twenty-seven milch cows were given all the alfalfa hay they would eat and then turned into a sorghum field of 6.7 acres for fifteen minutes. The sorghum was from 18 to 24 inches high. The next day they remained thirty minutes, the third day forty-five minutes, and so on, increasing fifteen minutes daily until they reached an hour and thirty minutes, when they were left to run at will. During this transition period the cows were given all the alfalfa hay needed to keep up the normal flow of milk. For the first nine days this amounted to nearly twenty-four pounds daily per head. After twelve days the cows were allowed to pasture the sorghum at night as well as during the day. For the rest of the month these cows consumed less than five pounds of alfalfa hay daily per head.

If it had not been for the sorghum pasture it would have required at least twenty-four pounds of alfalfa hay daily per head to keep these cows up to a good flow of milk. This would have amounted to ten tons. As it was, the cows consumed only four and one-half tons, making a saving of five and one-half tons. At \$10 per ton (a low price for this year), this would amount to \$55, which, divided between 6.7 acres, would amount to a saving in alfalfa consumed of \$8.20 per acre.

On August 1 the cows were turned into a fresh field of sorghum, from 3½ to 5 feet high, but with the same precautions as were exercised July 1. This time it did not take as long to get them on full feed, and after the first week they had free access to the sorghum day and night. The two fields of sorghum are connected with each other and the cows not only have access to both fields, but in getting to the second field are obliged to pass through the first, where second growth sorghum is making a vigorous start after the recent rains. Up to the present writing (August 13) the herd has not experienced the least particle of trouble from poison or even bloating.

**THE DANGER IN SORGHUM.**—During the time the Kansas Station has been pasturing sorghum several reports have been received of cattle dying in ten or fifteen minutes from the time they entered the sorghum patch, but in every case where we have been able to get the details the cattle have eaten the sorghum on empty or nearly empty stomachs. Cattle should have their stomachs so well filled that they feel completely satisfied before touching the green sorghum, and then allowed to eat only a few minutes at a time until they are accustomed to it. If sorghum can be pastured successfully, as has been done by the Kansas Experiment Station, it means that the dairymen and stockmen can get an immense amount of pasture from a small area, which is avail-



able at a time when their other pastures are getting short and dry. Pasturing will also be the most economical way of utilizing sorghum. The man who turns his cattle in a sorghum field, however, must realize that he may be taking risks. He must weigh the evidence for and against its use, and then decide for himself whether the benefits will outweigh the risks.

#### What Is a Good Cow?

In our issue of last week we had an interesting essay by a California dairyman as to the advantages of thoroughbred or high-grade cows. It is timely to have a careful inquiry into what a good cow is, and such was made by Prof. T. L. Haecker of Minnesota at the last meeting of the Connecticut Dairyman's Association.

**PROF. HAECKER'S ACCOUNT.**—Before taking charge of the dairy herd of the Minnesota Experiment Station I traveled extensively over the State, looking up its dairy interests, and the prospect was not flattering. Low prices for all dairy products, little knowledge among dairymen, and a type of cows not suited for the business, were the rule. When I went to the station I determined to work out the cost of production, and since I have been there we have weighed every pound of food the animals were fed, known its cost, weighed all the milk received, and tested it for butter fat.

**HOW TO FIND OUT.**—We feed each cow all she can consume and assimilate. At the end of the first year we found that some cows charged us 17 cents per pound for butter made from their milk, while others charged only 12 cents, and others ranged between these two sums. The breed made no difference—some Shorthorns made cheap butter, and some Jerseys costly butter. Breed had nothing to do with the cost—it was all in the cow. Size or color had nothing to do with it. We put all the cows that made cheap butter on one side, and ranged the cows who charged the most for butter on the other side. Each side, no matter what breed, showed similar characteristics. Those that charged a high price were sleek, nice looking animals, that would answer the description of a general purpose cow, while those that made butter cheap had the genuine dairy type, the light quarters and the heavy, wedge-shaped barrel—every pound of food consumed was put to good use.

**USE OF FOOD.**—It takes just about so much food to run the machinery of every cow. The question is, What does she do with the rest of her food? If she returns it to you in the form of milk, she may be a profitable cow; if she lays it on her back as fat, she is not a dairy cow. Always avoid the cow that has a tendency to lay on fat, if you want cheap milk production. I am going to tell you how to know a good cow. It's a simple matter. One or two signs tell a good cow as well as twenty. In a poor cow the thigh runs down straight, so that there is no space between the thigh and the udder on one side and the tail on the other. There should be plenty of daylight between the udder and the tail. One of the best ways to tell what kind of a cow you have is by her temperament. A good dairy type has a sharp spine, strongly developed nervous system, and sharp hip bones. A good cow has a large, wedge-shaped stomach, for she must have a large and powerful digestive system to use up her food quickly and make the best returns for it.

**PRODUCT.**—Some of the animals the first year made but little over 200 pounds of butter per cow, while others gave over 399 pounds. We have kept up this record every year and the last year our cows averaged 399 pounds per cow, and at a cost of only 4.2 cents per pound of butter for feed. One cow gave us 512 pounds during the year. These were not picked, high-priced dairy cows, but the common run of dairy stock. You, in Connecticut, have much better types of dairy breeds, as in our country too much attention has been paid to beef animals and not enough to the true dairy type animal.

We plan to have the animals come in in the fall, in order that the work may be done by the university students. The cows are in the stable only about two hours per day. They are turned in at 5 A. M., fed and milked, turned out in the covered barnyard, where running water and salt are accessible at all times. The yard is kept bedded with sawdust and shavings, that the cows may not eat any fodder except that given them in the stable. They are turned into the barn at 5 P. M., fed and milked and turned out again.

We never have a cow off her feed or out of condition, and they are fed all they can consume. We feed balanced rations and study minutely the cost, as we want to get the cheapest possible ration. We save a cent wherever it can be saved. For grain feeds we use bran and barley—largely coarse bran. We hardly consider middlings fit for bedding. Bran is our great grain food.

**RATIONAL APPETITE.**—When asked if a cow would not eat more than she could digest, he said: "No; that is, after a little, provided it is a balanced ration." Let a cow loose at a meal barrel, and she will gorge herself; but begin gradually in feeding,

and feed a balanced ration, and she will not overeat. When she is up to or a little above her full capacity, she will begin to leave a little in the manger. This is the time to watch her. Drop off just a little and feed all she will eat clean and with avidity. I take stock in the Babcock test, but not in the theory that you can take the Babcock test under your arm and go off and by testing a cow's milk at once determine her value. She must be tested several times during her milking period. You must also know how much food she consumes to know whether or not she is a profitable cow.

## THE APIARY.

### A New Foul Brood Called Black Brood.

The New York bee keepers are conducting a vigorous campaign against foul brood under a new law and with an appropriation to provide for expert inspectors, etc. The Country Gentleman states that the reports of the inspectors up to July 20th show that 416 apiaries, embracing 13,393 colonies, were examined, 229 found more or less infested with black or foul brood and 1834 colonies were condemned, either to be destroyed or treated with such remedies as have proved effective. Early in the spring the inspectors found thirty apiaries of 417 colonies dead from lack of winter care. Of the 416 apiaries examined, 1 embraced 800 colonies, 22 over 100 and 113 over 50 colonies each.

It is a source of gratification to the commissioner that those apiarists who followed the instructions given by the inspectors have been very successful with their bees. We give for the benefit of our readers the preventive and remedial treatment adopted by the Department, with instructions issued to those whose colonies become infected with the disease:

The disease is caused by the presence of a specific germ called *Bacillus mili*, which develops in the larva, usually causing death in the larva or pupa stage. The healthy larvae are of a pearly whiteness and lie curled around the bottom of the cells, but, when attacked with this disease, change to a yellowish tint. Dying, they settle down to the lower side of the cells and continue to grow darker in color until brown or black, emitting a sickening odor. Later the bacilli undergo a change to the spore form, corresponding to the seed of plants. These spores are innumerable and completely cover the combs, frame and every portion of the inside of the hive. All honey in or about the hive is also thoroughly charged with them. Therefore, if any honey, combs, etc., from a diseased colony come in contact with a healthy one, the latter also will contract the disease.

**CAUTION.**—It is hoped that bee keepers will realize the extreme caution necessary to be exercised in dealing with this disease, which is probably more malignant than the old foul brood. It should be as vigorously treated as a case of smallpox or yellow fever in our own family, and it requires as thorough disinfection. Carelessness or negligence in handling or treating will be sure to cause the spread of the disease in your own and neighboring apiaries. Do not tolerate any very weak colonies in your apiary, as they are liable to be robbed out when honey is scarce in the fields. If they are diseased, the best and safest way will be to kill the few bees remaining, at evening, by brimstoning or placing pyrethrum (Persian insect) powder in the hive, and afterward burning the combs, frames, quilts, bees, etc. Dispose of all honey, combs, brood, etc., immediately after treating diseased colonies, as you are never safe with any of these standing around.

Always disinfect the hands, tools and smoker as far as possible (of course the leather of the bellows cannot be wet much without injury to the same, but it might be sprayed lightly with the solution) after handling infected colonies by washing in a solution of carbolic acid, using one tablespoonful of pure acid, either liquid or crystals, to one quart of water; or a solution of corrosive sublimate may be used (one-eighth ounce dissolved in one gallon of water). The latter is probably the better disinfectant, but more destructive to metal, and should be kept in earthen vessels. If many diseased colonies are handled or treated, it would be well to disinfect the clothing afterward by sprinkling or spraying with one of the solutions named, or fumigating with formalin.

**MANAGEMENT.**—Always treat the disease at evening, after the bees have stopped flying, that there may be no stray bees to enter healthy colonies. If you have good hives, they may be saved and used again after thorough disinfection by one of the methods given, but in no case try to save any of the contents unless there is much honey or wax, which can be saved by cutting out and boiling thoroughly for one hour. It will be well to add a little water to the honey to prevent burning. Do all handling of honey, etc., under cover, where no bees can gain access to it.

If it is desired to feed the boiled honey to the bees, the addition of the sodium salicylate after the honey is cold (the same as with the sugar feed) is recommended. Do not buy any honey for feeding, as there is great danger of getting that which is infected; the sugar feed is safest. Do not exchange combs or

supers from hive to hive in apiaries affected with the disease.

**TREATMENT.**—The best time to effect a cure is during a honey flow. If stocks are weak to medium, unite a sufficient number to make them as strong as a good prime swarm. In any treatment, when confinement of the bees is prescribed, they may be placed in cheap, light boxes of sufficient size, say a bushel or more; or, if preferred, in the old hives before disinfection. Be sure that they are bee-tight. Cover one of the largest sides with wire cloth. In re-hiving, place them in new, clean or disinfected hives. The cheap boxes should be burned after you have finished your treatments.

In any of the several treatments given, it is not necessary to use foundation starters in the primary treatment; when re-hiving the bees, they may, if preferred, be placed upon starters instead of full sheets of foundation. In rendering wax from diseased colonies, never use a sun extractor, but subject to heat for one hour or more over the stove.

New swarms from diseased stocks should be treated exactly the same as such stocks. It would also be well to remove the rest of the bees from the old hive at evening and unite them with the swarm, before confining same, finally placing them on their old stand. Should these new swarms become mixed, on the wing or otherwise, with swarms from healthy colonies, all must be treated. Some recommend as quite important the introduction of a new queen, at the time the bees are removed from the old combs, caging the queen for several days. Be sure that she is reared in a healthy colony, away from all infection.

**No. 1.**—Shake all the bees off their combs, if in frame hives, or drum them out of box hives, and place them upon comb foundation starters and cage the queen. After five days remove the starters and make them into wax at once by boiling or steaming (not with sun extractor) and give full sheets of foundation, keeping the queen caged five days longer. This will give time for all infected mature bees to have disappeared before any brood is reared. If a cure is contemplated when little honey is coming in, the above modified Quinby plan should be observed in every detail and the bees fed with salicylated syrup until the combs are well filled, so that all food may be rendered antiseptic by the time brood rearing begins. This syrup consists of sodium salicylate one ounce, water five gallons, white sugar forty pounds. Make syrup without heat.

**No. 2.**—In the modified Quinby plan, instead of caging the queen, feed heavily within the hive the salicylated syrups for at least ten days. All of the germs deposited for the first five days would fail to grow and be removed when the full sheets of foundation were given, and if these syrups were continued five or six days, or longer, there would be no immediate recurrence and possibly a permanent cure.

**No. 3.**—Place bees in hive with wire cloth top or bottom, and place in a cool, dark place—preferably a cellar—set hive on end, and if there is no flyhole in upper end, bore one. Over this hole place a feeder closed at the top and filled with the salicylated syrup, replenishing the food as needed. After four or five days remove them to their old stand and hive them on full sheets of foundation. Continue to feed the syrup for four or five days.

**No. 4.**—Shake off or drum out bees, and confine in cheap empty boxes or hives, without starters or combs, ventilating well. Feed liberally phenolated syrup (1 part pure phenol to 500 or 600 parts of syrup). After three or four days shake bees at night into a hive with starters, and continue to feed with medicated syrup. The combs built in the box may be melted into wax.

**DISINFECTION OF HIVES.**—There are several methods of disinfecting hives, so take your choice. Some boil the infected hives one-half hour in linseed oil. Others boil in water one hour, or expose to superheated steam for some length of time. Three other methods follow:

**No. 1.**—Wash hives, covers and bottom boards in a solution of corrosive sublimate (one-eighth ounce to one gallon of water), then rinse well and dry, after which paint over carefully and liberally with a solution of carbolic acid in alcohol (one part of carbolic acid in crystal form, or one and one-half parts of pure fluid carbolic acid, being dissolved in two parts of wood alcohol). This should be freely brushed and soaked into the corners and joints of the hives and bottom boards.

**No. 2.**—Take an iron rod, three or four feet long (a long stove poker or cleaner will answer) and wind a bunch of rags or cotton waste about one end, fastening with cord or wire. Saturate the rags or waste with gasoline, strike a parlor match, drop it on the ground and touch rags to same. Take this precaution to avoid risk of accident in lighting torch, as this fluid is very explosive, also use great care in handling the liquid. Let one person hold the torch, while another holds the hives in such a position as to scorch the entire inner surface.

**No. 3.**—Paint the entire inner surface of the hive with kerosene oil, fire same and allow it to burn until the surface is blackened; then throw half a cup of water into the burning hive and quickly put a cover on, which will instantly extinguish the flames.

These precautions and remedies ought to stamp out all germs.



## Agricultural Review.

### ALAMEDA.

**THE FIRST PRUNES.**—Niles Herald: The first shipment of the new crop of prunes was made from the E. A. Ellsworth drier Wednesday evening by the California Dried Fruit Co. The shipment consisted of a twelve-ton carload and they were all packed in fifty-pound boxes. This breaks the State record, as it is generally September 1st before any effort is made to ship. The Ellsworth drier has also shipped nine carloads of this year's dried apricots. Of these two cars went to San Francisco, two to San Jose, one to St. Paul, three to St. Louis and one to Ogden. The first five cars carried away 260 tons of sacked fruit and the other four had seventy-two tons of boxed fruit.

**HAY BLOCKADE.**—A Livermore dispatch states that the effects of the strike in San Francisco are likely to be quite serious to the farmers in that locality. At Altamont there are said to be over 6000 tons of hay to be shipped from the station. Upon the arrival of cars there is a scramble among the farmers to secure shipping facilities. The younger men risk their lives in boarding the trains before they have come to a stop, and the older men are obliged to stand back and take the best that is left. The shortage in rolling stock is said to be due to the number of loaded cars on sidings on account of the strike. Many farmers who have no barns of sufficient capacity are hauling hay to Livermore warehouses.

### BUTTE.

**FIRST CARLOAD OF GRAPES.**—Oroville Register: Jas. H. Leggett shipped the first full carload of grapes from Oroville recently. The fruit went to Seattle by rail on account of the strike in San Francisco, as he could not ship to the city by rail and thence by water to Seattle.

**PEACHES PAY.**—Biggs Notes: Lew Sanders, who owns a fine orchard on Feather river, lately sold his Muir peaches at 6½ cents a pound. He will have about eighteen tons of fruit when dried and ready for delivery at Palermo.—Mrs. E. Kirby, who owns a fine orchard on Feather river in Union district, has contracted to deliver her crop of dried peaches at Palermo for 6½ cents a pound. It is estimated that she will have about twelve tons, which at the price named will return about \$1500.

**CRUSHED BY A MULE.**—Chico Record: Wm. Brannigan, an employe on the Smith & Curry farm, met with an accident recently which is almost certain to cost him his life. He was engaged in harnessing a mule when the animal jumped and jammed him against the manger, bruising and crushing him so severely that a congestion of the lungs resulted. The next day he was suddenly paralyzed on the right side and went into a comatose condition. Dr. Meng is of the opinion that there is no chance for his recovery.

### FRESNO.

**HORSE KILLED BY EATING PEARS.**—Fresno Republican: A valuable horse belonging to William Rudy of Oleander died suddenly Sunday evening from eating rotten pears. Dr. J. Graham of this city treated the horse; but the malady was so peculiar that, after the death of the horse, he held a post mortem examination. The pears had proved to be indigestible and had swollen and inflamed the stomach so as to cause the sudden death of the animal.

### HUMBOLDT.

**CREAMERY PRICES.**—Arcata Union: The creameries of this section paid as follows on the 15th inst: Arcata 20, Humboldt Premium 20½, Laurel Dell 21, Cauzza Bros. 20, Minors 19½. The valley creameries paid as follows: Abrahamsen 20½, Andreason 24 days 20½, 7 days 23, Capitol 21, Cold Brook 21, Cold Spring 21, Cream Valley 20½, Crown 21, El River 20½, Excelsior 24 days 21, 7 days 22½, Ferndale 20½, Grizzly Bluff 20½, George 21, Pioneer 21½, Riverside 21, Sunset 21½.

### KINGS.

**VALLEY CATTLEMEN.**—Hanford Sentinel: At a meeting of the Central California Stock Growers' Association held at Visalia Thursday thirteen new members were added to the association membership. Addresses were made setting forth the good already accomplished since the association was formed, about a year ago. There is now a membership of 123 and one part of the business of the organization is to round up and bring to punishment the cattle thieves who have infested the valley. An executive committee was appointed for Kings county, consisting of Hurray Nidiffer and E. Sanborn.

### LOS ANGELES.

**FRUIT OPERATIONS.**—Pomona Progress: The cannery is still running full blast on outside peaches, 539 people being

on the pay roll at present. Some pears are also being handled. It is expected that peaches will keep the institution going for five or six weeks yet. At the Pomona Fruit Growers' Association yards a few people are engaged all the time drying peaches. Manager Dorsey says that work will begin on prunes before the end of the week and that the Association expects to use between 350 and 450 tons of that fruit this season.

**REPORT FROM ORANGES.**—Pasadena Star: The Pasadena Orange Growers' Association has made public its report of the business of the year ending June 30. The report is as follows: Number of loose boxes received at the packing house, 59,729; loose boxes packed, 38,565; carloads shipped, 106; number of growers who are members of the Association, 137; average number of employes, 30; cash paid for picking oranges, \$1418.32; cash paid for hauling same, \$980.27; cash paid for packing, \$967.09; cash paid for labor in packing house, \$2235.52; cash paid for box making, \$309.73; cash paid to growers, \$23,000; cost of packing per box (fruit delivered at packing house), 34½ cents.

### MADERA.

**NEW GRAPE CRUSHER.**—Madera Mercury: A Dinuba man has invented a new grape crushing machine that works on the centrifugal plan and separates the stems and seeds from the juice as the crushing goes on. It is expected to revolutionize the manner of handling wine grapes.

### NAPA.

**YOUNG HOP PICKERS.**—St. Helena Sentinel: Rev. Father Crowley arrived Monday, bringing thirty-two boys from the Youths' Directory of San Francisco, who will pick hops for James Dowdell & Son. This move is an experiment as yet and is made to assist in solving the problem of farm help. Hop picking will begin in earnest next week and the experiment of bringing boys from the city will be watched with interest.

### ORANGE.

**EARLY CELERY.**—Santa Ana Blade: William Kesemann has about half an acre of celery now ready for the market. He has more that will be ready when this supply is exhausted, and from now to the end of the season will be in the market.

### RIVERSIDE.

**CLOUDBURST DID MORE GOOD THAN HARM.**—Riverside Enterprise: In the heavy rainfall of the last storm in the country north and east of Moreno all the canyons in the San Timoteo hills were booming. Water continued to flow in the oil well canyon till late the following morning. The benefit to orange orchards will more than offset the damage to drying fruit and hay.

**BROOMCORN AT ETHANAC.**—Perris Progress: The Ethanac Co. has planted several fields of broomcorn—twenty acres or more—in heavy, red adobe soil. A week ago it was 4 and 5 feet high. Much had headed out to a height of 6 or 7 feet. It is very thick on the ground and has received the best of care. Judging from other crops, one would think that when broomcorn is very thick on the ground the quality would be finer. It will produce a big crop of fodder and a great deal of seed.

### SAN BERNARDINO.

**NEW LAND MADE BY FRESHET.**—San Bernardino Sun: The raging torrent that came tearing down the Redlands zanja after Friday's storm did considerable damage, and it is estimated that nearly 200 acres of cultivated land were washed over and damaged. Up near Crafton the water washed away the banks of the zanja and overspread a large area of territory. The torrent in Mill creek played a peculiar prank, and now, near the entrance of the canyon, there is a small island or plateau, probably covering five acres, which is from 3 to 6 feet higher than the surrounding country. The water brought down an immense amount of earth from the canyon and adjoining foothills and piled it up, and, unless the land is washed away, it will within a few years be good, tillable soil.

**BLACK SCALE.**—San Bernardino Sun: A war against the black scale is being waged in Ontario by the county horticultural commissioners. Thirty-five men are at work and an average of thirty acres of trees are being sprayed daily. The spraying of the trees costs about \$20 per acre, making the daily expense \$600. The expense connected with it is paid by the owners of the trees, and the demand is so great that the force of men employed is overcrowded with work.

### SAN JOAQUIN.

**GRAIN, BEANS AND ALMONDS.**—Stockton Mail: Grain is not arriving here in as large quantities as usual at this season of the year. Many of the farmers are still engaged in the harvest field, and that is

supposed to be the reason; there is too much work on the farm to spare the horses for grain hauling. The cereal crop of San Joaquin county this season will be about four-fifths of an average yield. On the red lands in the eastern part of the county the grain did not turn out as well as had been expected and growers on the black lands were also disappointed to some extent. There is a fair crop of almonds, but the price is considerably less than it was last year. Last year, however, the market reached high-water mark, exceeding the highest quotation ever known before. Complaint has been made that some of the almonds shipped to the East were improperly cured. Unless the kernel is dry when the almonds are bleached with sulphur the fumes are absorbed by the kernel which then becomes bitter. A good crop of beans is expected in this county. The first to arrive will be hand-picked, black-eyed beans. The first pods to mature are taken off the vines by hand, and the price is high owing to the comparative scarcity. The main crop is harvested by cutting the vines and thrashing.

**LARGE ORANGE CLING PEACHES.**—Lodi Sentinel: W. D. Sturtevant has on exhibition some fine specimens of the Orange Cling peach. They are from the orchards of J. B. Cory, near Acampo. The largest in the lot weighs 21½ ounces, and measures 13 inches around.

### SAN LUIS OBISPO.

**A FINE BARLEY CROP.**—Arroyo Grande Herald: Frank Silva, who bought a part of the Crothers ranch at Verde, has a splendid yield of barley this year, realizing 1200 sacks from thirty-five acres, the sacks weighing from 110 to 117 pounds each.

### SANTA CLARA.

**CANNERS RUNNING HEAVILY ON PEACHES.**—San Jose Mercury, Aug. 26: Peaches in Santa Clara valley are ripening rapidly and canneries now have fruit to run at their fullest capacity. Conditions apparently justify the statement that the canners will pack a larger quantity of peaches this year than usual, because the pack cherries and apricots has been less than ordinary.

### SANTA CRUZ.

**APPLES RIPENING NICELY AND IN GOOD DEMAND.**—Watsonville Pajaronian: The cool, foggy weather is bringing out the apple crop nicely. Fruit is growing rapidly, is coloring well and is freer from insect pests than for many seasons, owing to the greater care in looking after orchards. The crop is going to be a bumper, and trees which seemed a few weeks ago to be shy bearers are now showing heavy loads of fruit. The dense foliage had hidden many of the apples. If there are any Pajaro apple orchards unsold, it is not because they have been overlooked by buyers. The canyons and hillsides have been gone over by buyers in the search for orchards, and we doubt if there is a grower who has not had an offer for his crop, and few, if any, orchards are now unsold. Never before has such activity been shown in buying. Prices for apples delivered in this city, loose in boxes, have reached \$30 per ton. That means from 55 to 70 cents for cost of the apples in each packed box. Then add to these figures the cost of grading, packing, wrapping, boxes, nails, labels and handling to cars, and it will be seen that the fruit handlers will have to sell at from \$1 to \$1.15 per box to be on "Easy street."

### SHASTA.

**THOUSANDS OF ACRES BURNED OVER.**—Redding Searchlight: From a point on the Redding side of Buckeye to the Baird fishery on McCloud river there is not a piece of ground an acre in extent that has not been burned over recently.

### SONOMA.

**FINE FRUIT.**—Healdsburg Tribune: Ransome Powell exhibits a California clingstone peach weighing 1½ pounds. He also raised this season a Pippin apple that weighed twenty ounces.

**A REMARKABLE PEACH.**—Healdsburg Tribune: George Madeira has a phenomenal peach, grown on the fruit farm of Ransome Powell, in Dry Creek valley. The peach is divided exactly in half by a straight line, one side being an orange cling, yellow in color, and the other side what is known as an Indian peach, of a decidedly reddish tinge. It was grown on an orange cling tree, and there are no Indian peach trees in that vicinity.

### STANISLAUS.

**WHEAT GROWING HARDLY A SUCCESS.**—Modesto Herald: The Herald has made note of the obvious prosperity of Los Banos, on the dry West Side, where a crop of wheat was harvested this year for the first time in five years, and there's no price for it now they've got it. But wheat farming in the Los Banos quarter has been carried on during these years in

the way of a gamble, the community looking to small irrigated farms, to alfalfa, dairying and stock raising for proper sustenance.

**ABOUT GRAPES.**—Modesto Herald: Walter Garrison spent Sunday in the neighborhood of Lodi, learning, among other things, that the vineyardists in that quarter will derive \$50 per acre this year for their wine grapes, and that \$30 per acre has been the average revenue for some years. The price is higher this year. And this reminds us that no raisins will be packed at the Bald Eagle ranch, near Modesto, this year. The grapes out there are Muscatels, a good wine grape as well as a good raisin grape, and with prices ranging from \$20 to \$25 per ton Proprietor Ora McHenry figured that an offer from wine men was the more advantageous and accepted it. A Los Angeles gentleman who purchased 160 acres of land in the Westport quarter of Turlock district will devote the entire tract to Thompson Seedless, setting them out this winter.

### SUTTER.

**DRYING THOMPSON SEEDLESS GRAPES.**—Sutter County Farmer: In some of the vineyards in this vicinity Thompson seedless grapes are being picked for drying, being earlier than usual; but the bulk of the crop will not come in until the first of the month. The crop is very light this season on account of the frost, yet some vineyards will make a good yield. One sale has been reported at \$25 per ton for the fresh grapes, being about the same as last year; but this is considered very low.

**SEEDLESS GRAPES LIGHT.**—Sutter Independent: Reports from the Seedless grapes indicate that a very light crop will be gathered. In the Onstott and Stabler vineyards they will hardly pay for picking. In the small vineyards around the Buttes the same conditions exist. The late frosts last winter worked a greater injury than was supposed early in the season. For some cause, the Muscatel grapes are slow about ripening this season. It is now time for drying, but very few are in a drying condition.

### TEHAMA.

**A PEACH.**—Red Bluff News: J. C. Day has an Orange Cling tree from which he plucked a peach that measured twelve and one-half inches in circumference and weighed fourteen and one-half ounces.

**SHEARING IN THE MOUNTAINS.**—Red Bluff News: Two loads of wool—thirty-three bales—belonging to Galen McCoy, reached here from the mountain range Monday evening and were stored in the Cone & Kimball warehouse. Mr. McCoy is shearing in the mountains, finding it more satisfactory to haul the wool down than to have the sheep carry the wool to the valley, over dusty roads, to be clipped here. The Gerber & Conard sheep are also being shorn in the mountains and a portion of their wool has already been hauled down.

**A ONE-TENTH CROP.**—Red Bluff News: W. S. Montgomery, who has the Adobe orchard on the Cone ranch, finished cutting peaches for drying on Monday. He will secure about a carload of dried fruit from an orchard which, but for the frost, would have produced ten times that amount.

**WIND BLOWING PEACHES OFF.**—Red Bluff News: Charley Cofer was down from the Summit ranch Friday and said that the south wind, which on his elevated ranch blows harder than on the lower lands, is blowing his peaches off the trees faster than his force of eight people can gather, cut and spread them for drying.

### VENTURA.

**BIG HAY CROP.**—Oxnard Sun: Speaking of the hay crop of Ventura county, a prominent hay baler was heard to remark the other day that the district south of the Santa Clara river would, this year, produce the largest crop in its history. He stated that, despite the fact that there were now eighteen balers running at full blast in this district, it would take at least two months more to put the entire crop into the bale.

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## THE HOME CIRCLE.

### How Competition Works.

Old Susan Kellum owned a cow, and lived in Germantown. In selling milk she found she must compete with Neighbor Brown; 'Twas almost like starvation for herself and little Dick. One day her boy came running in and said, "Brown's cow is sick." Then quickly came a twinkle in old Susan Kellum's eye— It seemed she wouldn't worry though her neighbor's cow should die.

Brown's customers began to come to buy her milk and cream— She sold a pint to Dr. Smith, a quart to Lawyer Beam, And Brown himself came over then to buy a quart or so. 'Twas then that Susan tried her best strong sympathy to show, But she couldn't hide the twinkle in the corner of her eye— 'Twas plain she wouldn't dress in black though Brown's old cow should die.

She sold new milk, skimmed milk and cream, sold all the cow would give, And little Dick and Susan Kellum knew then just how to live. A box must hold two sacks of flour, the shed a ton of coal, Some apples in a coffee sack, potatoes in a hole; And Susan had a twinkle in the corner of her eye— It plainer grew when Brown had hung his cowhide out to dry.

So, when our farmers have a crop while Russia suffers drought, Or when a teacher gets a school by showing some one out, Or when a workman gets a job with a dozen standing by, Oh, this world is full of twinkle. Have you tried to find the why? There are many twinkles twinkled by those who have the pie, Like the twinkles Susan twinkled in the corner of her eye.

But do not censure harshly, though many starve and die, While others live in plenty with a twinkle in their eye; But let us work together for a better time that's nigh, When an honest man can live without a twinkle in his eye— When there won't be twinkles twinkled by those who have the pie, Like the twinkles Susan twinkled in the corner of her eye.

—Detroit Free Press.

### Jack's Regeneration.

"What a shame it is for such a nice girl as Mary Hallett to go with a worthless, shiftless fellow like Bert Hill!" Mrs. Raymond was very much in earnest. "I'd say something to her, only girls are such fools, it might be worse than to keep still. She looks all tired out now, with her work and worry at home. How will she look when she's married to a drunkard?"

"It's an awful pity," said her neighbor, and as Jack Raymond passed through the room she glanced curiously from mother to son. She thought, "I guess Bert Hill ain't much worse than your boy." What she said was, "That's real pretty cloth your working on."

Jack went up the hill behind the house till he came to a spot where the April sun shone warmly under the pine trees. He dropped upon the needle-covered ground, pulled his hat over his eyes, and calmly finished the nap which his mother's indignant protest had disturbed.

The wind blew softly among the pine branches, flies and wasps crept into the sunlight, bluebirds sang, and far overhead a hawk sailing on steady wings cried cruelly. At length Jack stirred, removed the hat from his eyes, and sat up. He hitched along on the ground until he got his back against a tree trunk. He gazed out upon the spring landscape meditatively. Then his lips began to move. He was talking to himself, inaudibly.

"It's a shame for such a nice girl as Mary Hallett to go with a worthless, shiftless fellow like Bert Hill. Yes, that's so. It ought to be stopped. Talking won't do any good; something's got to be done. I suppose I

might undertake the job." He grinned slightly at the thought. "It would be a good idea to go into the missionary work, and I'm sure that it is a good cause to rescue Mary Hallett from Bert; she's a nice little girl, and it would be a pity for her to marry him. Bert doesn't even treat his mother well—what would he do to Mary?" He straightened up almost energetically. "I vow I'll do it," he said. Then he meditated again.

"Wonder if I can?" he mused, doubtfully. He felt in a pocket and took out a small, round mirror and gazed in it earnestly. He took off his hat and brushed his blonde hair back from his forehead; then he put the mirror back in his pocket. There was a look of confidence in his blue eyes.

"Guess you'll do," he said. "Rather against you, being light, though; but where there's a will there's a way."

He arose and started down the hill. Half way down he paused. "Suppose she should fall in love with me, and then I'd have to go back on her and break her all up? It isn't likely, to be sure, but what if it should happen?" There was a rueful pause—then he said: The end justifies the means," and went on down the hill.

Although Jack's friends maintained that he would be all right if he only kept out of bad company, the general opinion was that he and Bert were about evenly matched for worthlessness and shiftlessness. And when Jack began to go to Hallett's, people said, "O, dear! Two of them!" They continued to be shiftless; but it was remarked that, unlike Bert, Jack had given up drinking.

"You'll have to stop that," Jack told himself. "This is going to be a sharp game, and you can't afford to muddle what brains you've got."

Some young men would have begun their campaign by going of an evening to call on Mary, but Jack's methods were different.

It was Monday morning, just as Mary was carrying a basket of clothes into the yard, that Jack appeared on the scene.

He greeted her cheerfully, then went and took the clothesline from her. "I'll put this up," he said; then he pulled it tight and fastened it firmly.

"Now, you give me the big things to hang up," he said. "I can't do anything with handkerchiefs and such like, but I'm great on sheets and tablecloths."

Mary laughed. She was too surprised to object, and in a short time the clothes were all hung on the line and Jack had put the clothespole under it.

"Now, if you've got any troublesome young brothers and sisters you'd like to get rid of temporarily, why, just send 'em along; I'll take charge of them and deliver them safely over to you at noon."

"O, if you would," said Mary. "They are so fretful this morning, and in my way all the time."

It was with a sigh of relief that, a few minutes later, she saw Jack and the two boys and one girl passing down the road. She continued along with her work bravely, and just as dinner was all ready and her father had come in, Jack, true to his promise, left the three children at the door and went home without stopping to speak.

The children gave glowing accounts of their walk. "And Jack's going to make us a kite and fly it the next windy day," they ended.

Nearly every day after that Jack took the children off into the woods and fields, giving Mary a vacation from their noise. When he went to get them or when he brought them back, he always found some little thing to do to help her.

Then one Sunday he dressed with unusual care, looking remarkably fresh and clean, too, and went to church and Sunday-school. Afterward he walked home with Mary, holding her sunshade over her carefully all the way.

Mr. Hallett staid at home with the children Sundays, and it was rather tiresome for him. So when he saw Jack coming he brightened up, and asked him to stay to dinner, which he did, much to Mr. Hallett's satisfaction

and the children's boisterous delight. Mary's father dearly loved to talk, and Jack appeared to enjoy listening equally well.

After dinner Mr. Hallett went into the sitting-room and fell asleep in his chair, while Jack insisted on wiping the dishes for Mary. The children swarmed about him and got in his way, till he declared that they were as bad as cats, and he'd have to sprinkle them and see if they would clear out then. When the dishes were done and Mary had taken off her apron Jack began to notice signs of uneasiness in her manner.

"About time for Bert," he said to himself, then aloud: "I should think you'd go crazy with those noisy youngsters around all the time. I'm going to take them away and you can rest, instead of working as you usually do."

Down the road they went, and they were hardly out of sight in one direction before Bert Hill appeared from the other. He, too, was dressed with particular care, but though there was no denying that he was handsomer than Jack, there was a certain set to his jaw, and a kind of fierceness in his dark eyes which were not prepossessing. These softened when he greeted Mary, and he became very agreeable.

But Mary, for some reason, felt uneasy and hoped he would not ask where the children were. She also dreaded their return. What would Bert say when he saw Jack?

But when the children came it was quite late, and Jack did not appear. Mary got them bread and butter, for which they clamored vociferously, and then, at Bert's request, walked up and down the road with him for half an hour, while he smoked a strong cigar.

After he had gone she sighed wearily. She felt dissatisfied with herself; and the children, as she put them to bed irritated her by their constant repetition of Jack's name. Later she sat in her own room and cried because she was tired, she told herself.

She had not reached that state of mind, which came only a few weeks later, when she cried from perplexity and indecision as to the course she should take. She had honestly supposed herself in love with Bert, and it took her some time to find out her mistake.

When Bert learned what was going on between the Halletts and Jack he was in a towering rage. He met Jack one night and stopped short before him, blocking the way.

"What do you mean fooling around Mary Hallett, then?" Bert raised his voice.

"Have I interfered with you? Have I ever been in your way?" demanded Jack.

"No, and you'd better not," Bert threatened.

"You'll be the one to suffer," retorted Jack, "unless you are more sober than you are now."

That night Jack held earnest consultation with himself up in the darkness of the pines. He applied many complimentary epithets to himself. "How could I be so base as to start in on this thing? To go to work deliberately to get a girl away from another fellow, with the firm intention of giving her up when I'd done it! It was vile; and how has it come out? It has come to this—that if she refuses to marry me I shall be the most miserable man alive, and will richly deserve it, too, for being so contemptibly mean."

For a long time he sat meditating, then he stood up, and there was a look of determination on his face as he raised it to the troubled sky, such as had never been there before.

"You've got to try and be half good enough for her now," he said. "And you'll have to work harder to do it than you ever dreamed of working before."

From that night it was noticed that a change had come over Jack Raymond. As time went on he could no longer be called shiftless. He was working hard, and people began to speak of him as "John." He continued to call at Hallett's, but Bert's visits had suddenly ceased.

It was in September that Jack asked Mary an important question as they were walking home from church.

Mary answered with a "Yes," and then Jack, with some hesitation and confusion, confessed his original plot.

"Do you suppose you can ever forgive me?" he asked at the end.

Mary spoke so low that he had to bend his head to hear her.

"I should have been grateful to you—after awhile—for saving me from him, even if you had not come to care anything for me yourself."—Ex.

### The Prevention of Summer Complaint.

Two serious dangers menace the baby during the heated term, namely, improper food and excessive heat. The almost inevitable result of giving the child at this time improper food—either that which is in a state of commencing decomposition, or that which is incapable of digestion by the undeveloped organs of the infant—is diarrhoea.

A baby should never be weaned in late spring or in summer, if it can possibly be avoided. If it must be weaned, or if it has always been bottle-fed, it is most important to remember that milk is its proper food. If it does well on diluted goat's or cow's milk, nothing else should be given.

In the cities during the hot weather the milk should be sterilized; but in the country, where it can be had perfectly fresh, it is better given in its natural state. But no matter how fresh the milk may be, or how thoroughly sterilized it has been, it will be turned to poison unless the nursing bottle is absolutely clean.

This bottle should be of an egg-shape so that there can be no corners where particles of curdled milk can collect, and the nipple should fasten on the bottle directly, without any intervening tube. There should be two bottles, so that there may be always a clean one on hand.

After nursing, the bottle should be thoroughly washed out with soda and hot water, and then boiled for several minutes. The nipple should be carefully washed out in soda and hot water, and then thoroughly rinsed in boiled water. Both bottles and nipples, when not in use, should be kept in water which has been sterilized by long boiling.

There is much more danger, especially in hot weather, in overfeeding than in underfeeding the baby, and the habit of nursing it, or giving it the bottle, every time it cries, is fraught with peril to its frail life.

Feeding every two or three hours in the daytime and twice at night is often enough, and, if the child is fretful in the intervals, it can be given a little cool water to drink.

When diarrhoea occurs, no food whatever should be given for a time, water being substituted for the milk at the regular nursing hours. The body should be sponged with cold water, and the child taken in the evening upon the roof or elsewhere in the open air. Summer complaint, if treated early, can often be easily checked; but it may become a serious and even fatal illness if allowed to run on untreated. Hence the wisdom of seeking early medical advice.—Youth's Companion.

### Fads About Food.

It has never been scientifically demonstrated that fish and other phosphoric foods can appreciably improve the brain and mind. Fishermen, for example, and fishmongers, who may be supposed to live largely upon fish, have never shown themselves to be in any measurable degree more intelligent than their neighbors. Indeed, it may be plausibly argued that they are a little less so. The truth is that that particular food which best agrees with the particular individual, and which best maintains his general health at a high level, is the best for the brain and every other organ of the body, as well as for the whole man. Common experience has long ago formulated the saying that "what is one man's meat is another man's poison." Science now comes forward to tell us exactly the same thing, and to impress upon every one of us the necessity of finding out the diet best suited to ourselves, and sticking to it.—London Hospital.



## White Roses.

White roses, white roses! My lattice they twine,  
With fragrance and beauty so chaste and divine;  
With thorns all concealed in their clustering snow,  
And white wings adrift on the green turf below.

But each waxen petal, all 'broidered with dew,  
Is but to my soul as the blossom of rue;  
And, in seeming, each thorn, like a poisonous dart,  
Is pricking and pricking away at my heart!

For she loved them, she wore them, and in her bright hair  
She twined them, and blushed that I called her so fair.  
And oh, how they call back the hours that are fled,  
Blest hours with my lost one—my love that is dead.

—Daisy Wright Field.

## Pathetic Story.

"My Rosary" was born of a tragedy. John Philip Sousa, after hearing it sung, exclaimed, "That song came from a broken heart." Its tender, plaintive melody tells what the composer's lips could never utter, and its sadness awakens an echo in every heart.

When Ferdinand Lust's music was at the height of its popularity not many years ago he had all the money and friends he desired. He held the position of organist in a Vermont church at a salary of \$3000 a year, and was instructor to Modjeska's son. An opera of his was meeting with big success and his royalties from the famous "Trilby Waltz" alone brought in a small fortune. He traveled far and wide and visited many parts of the earth. He had all that wealth, health and fame could give him.

But there came a change. When the years began to creep upon him the wealth, health and all began to fade away. He drifted out to San Francisco and taught for a few years, and then went to Colorado Springs. Then he became a wanderer without home or friends.

He joined the Marie Bell Opera Company as conductor, but things didn't go well, and when Clarksville, Tenn., was reached the organization disbanded. Without a cent of money, the now feeble and gray-haired composer was thrown upon his own resources and tried to earn a few dollars by teaching. But he was lonely, in bad health, and had no friend, brother, or sister. His life was so desolate that even strangers noticed it and would speak a kind word to the gray-haired musician. His sorrow was increased by a romance of his youth. The girl he had loved in the fatherland and from whom he had been separated by a lover's quarrel had been lost to him and he knew not whether she was dead or alive.

But there was one who brought cheer to his last days. She was a beautiful southern girl with a fair, soft complexion of the southern clime. She had seen but nineteen summers and was as sweet and unselfish as she was beautiful. She was his favorite pupil and she always tried to throw a few rays of sunshine into his life. Sometimes when the lessons were over she would pin a rosebud on his coat or send some little delicacy to his lonely studio. Often there were big bunches of southern roses. He would place them on the piano and play out his soul to the sweet-scented beauties. Once he pressed a bud in a book and pinned it to a poem.

But the gray hairs were growing thicker among the thin locks and his health was failing. One morning in the fall, that pretty Indian summer of the south, he went to her home to give a lesson as usual. She saw that he was very weak and she did not want him to teach that day. But he insisted. He needed the money, and she reluctantly yielded. That morning she sang sweeter than usual and there was something especially tender in his music.

But the effort was too much for him. All of a sudden his head began to reel, his eyes dimmed and his voice failed.

He clutched at a chair and fell to the floor. He awoke on the couch and felt the touch of a gentle hand upon his brow. He seemed to realize that the end was drawing near and his eyes filled with tears as he gazed upon the young girl. If a friend like the one beside him could do so much for an old man, what would love have been in his younger days? She had been so kind to him and he owed so much to the tender words and gentle deeds. He seemed to be thinking of the past as he looked into her eyes and began to talk.

"Your name is Rosa. It is a sweet name. You are my friend, you—you—are my Rosa!" Then a sudden light came into the old man's eyes and he sprang from the couch. "My Rosa!" he exclaimed. "My Rosary! I will write a song, and it shall be called that for you." The gray-haired musician faltered a minute and then added in a pathetic voice, "And I fear it will be my last."

It was then one of the sweetest songs ever written was born. He was enthused with the inspiration and, almost too sick to stand alone, went to his studio. There all night long, by the light of an oil lamp, he toiled at the piano, putting his emotions into music.

By daylight it was finished. He made a copy and carried it to her to try. He never played an accompaniment as he did that morning, and she sang the song as it has never been sung since. A week later she sang it in a concert and it caught the public ear like a whirlwind, until to-day it is being sung from ocean to ocean.

But the musician never recovered from the shock. He took to his bed and gradually the eyes dimmed until after a little they closed forever. During his illness, almost every morning, there was a bunch of roses beside his bed that had been gathered by the fair southern girl, and often she would drop in for a moment to cheer him up and bring some delicacy which she had prepared with her own hands to tempt his appetite. It was she who sat beside his bed and cooled his brow as the last light in his eyes died away.

The funeral took place at the church which he had served as organist. It was an unusually solemn occasion. Just as the minister finished his discourse a beautiful, sunny-faced girl stepped to the chancel rail and began the tender, sweet strains of a melody to the soft accompaniment of the great organ. "My Rosary" was the singer and the song was "My Rosary," too. The dead composer lay at her feet. The audience was still as death, and as the last notes of the pure, sweet voice died away, hundreds of eyes were filled with tears.

## Why We Feel Hungry.

The sensation of hunger has not been easy to explain. The new theory of a German physician is that it is due to emptiness of the blood vessels of the stomach, and it is pointed out that hunger is appeased with the rush of blood to the stomach following the taking of food and beginning of digestion. In many anæmic patients, who have no appetite when the stomach is empty, the blood vessels of the stomach are really congested instead of being empty. Lack of blood in the stomach, in health, acts on a special nerve, which is a branch of the same nerve trunk as the nerves of the mouth and tongue. A stimulus applied to the tongue, as by a spice, thus increases appetite, while disease affecting the nerves of the tongue may produce loss of appetite, even when the stomach is empty.—Popular Science.

"I wish you would build me a swine cravat," said the delicately nurtured young man who had become a gentleman farmer.

The country carpenter puzzled over the order for a whole day, and at last sought the gentle child of fortune and confessed his ignorance.

"Why, dear me!" said the gentle youth; "I do not like to use the vulgar expression, but if I must I must. What I require built is a pigsty."—Baltimore American.

## Nightmare.

From time to time appear articles on this subject, sometimes long and learned, in medical and other periodicals, and sometimes with much traditional gossip about this and that case of frightful nightmare. The only substantial facts are a dream of some kind, connected with a final difficulty of breathing, a feeling of collapse and inability to move. No doctor that I ever conversed with on this matter seemed able to state the precise physiological condition, and perhaps this cannot be known, except as inferred somewhat from loss of control in certain nerves and muscles.

Position or lack of fresh air, or over-nutrition, interfering with proper oxygenation of blood, seem to be the chief predisposing causes. In my experience the occasions are usually an excess of bed covering, closeness of the room, lying on the back, occasionally late eating—one of these, or all together, and in general indicating the prevention in care to avoid general plethora and overheating thereby or by too much bed clothing, and to sleep on one's right side, so far as one can govern his position in sleep; also to provide for fresh air by furnace register in very cold weather, and more or less window ventilation at other times according to the season. Perhaps carbon dioxide, with its well-known effect on lungs, heart and nervous system, is the key to the subject.

It is a myth that monsters of some sort haunt every nightmare. There may be a dream with some alarming features, as of being pursued or of falling or other danger. Quite as often, in my case, there is a consciousness of the actual environment as if seen with open eyes and of the collapse only and its nature as nightmare, from which I seek to recover myself by possible slight movements resolutely increased, until successful in changing position, when I instantly awake as from a dream, and with no further sense of physical disturbance, except it may be a little shortness of breath.

The dreams are probably never very unnatural, very bad, in persons of good health and cheerful temperament. There is very likely no danger of death save in cases of heart disease. One's increasing discomfort prompts to desperate effort that is successful in getting aroused. A curious circumstance, needing explanation, is that when one's moaning attempts to call help brings that help, a touch or slight shake dispels instantly the nightmare.—H. W. Parker in Popular Science.

"No, I can make you no contribution; I don't believe in sending out foreign missionaries."

"But the Scriptures command us to feed the hungry."

The man of wealth shrugged his shoulders.

"Well, I'd feed them something cheaper than missionaries," he rejoined, with the brusqueness that characterizes his class.—What to Eat.

HE—I saw your old neighbor, Mr. Skinner, to-day.

SHE—Did you? What is he doing now?

HE—He's interested in one of those wildcat mining companies.

SHE—The idea! I never knew you had to mine for wildcats.—Philadelphia Press.

"ARE you de gemman dat said, 'De hoss mus' go?'" asked the colored man.

"I am," answered the enthusiast on the subject of mechanics. "Well, sir, I jes' desiahed to take de liberty o' sayin' dat I has de balkies' animal dat ever blocked a street, jes' around' de corner. I sho'ly would be much oblige ef you could come aroun' an' prove yoh words."

MRS. BILKINS (sweetly)—Do have another piece of cake, Cousin John.

Cousin John—Why, really, I've already had two; but it's so good I believe I will have another.

Little Johnnie (excitedly)—Ma's a winner! Ma's a winner! She said she knew you'd make a pig of yourself!—Brooklyn Life.

## DOMESTIC ECONOMY.

## Domestic Hints.

CHICKEN CROQUETTES, PRINCESS STYLE.—Chop the cold cooked meat of a chicken and mix with it half its quantity of chopped fresh mushrooms. Moisten with a little Madeira, dip in egg, in breadcrumbs and fry. No sauce with these croquettes. It would spoil the delicacy of their flavor.

PEACH OMELET.—Pare and stone three very mellow peaches, then press them through a sieve; add two tablespoonfuls of powdered sugar and the yolks of three eggs well beaten. Then stir in carefully the whites of six eggs beaten to a stiff froth. Turn into a greased baking dish and bake in a quick oven for fifteen minutes. Serve immediately.

BAKED TOMATOES.—For baked tomatoes select large, plump ones, and cut a slice from the top of each. Scoop out the pulp, mix it with fine bread crumbs, season with melted butter, onion juice and chopped parsley, and fill into the shells. Put on the covers, with a piece of butter on each, placed in a greased baking pan and bake in a hot oven. Garnish with cress or parsley.

SALAD MACEDOINE.—Take equal quantities of boiled white beans, boiled potatoes, celery roots, beets and string beans (the last four boiled in salt water), and cut into fine slices; put into a bowl two or three tablespoonfuls of oil, vinegar and salt, pepper and some sugar; put in all the ingredients, add some finely chopped parsley and chervil, and mix the whole together thoroughly; put the salad into a dish and garnish with lettuce leaves. If the vinegar is too sharp, dilute it with water, but of not too great a quantity.

CUCUMBERS STEWED.—Peel large cucumbers, and cut into halves lengthwise and then into quarters. Lay in a shallow pan, cover with boiling salted water, and stew gently for twenty minutes. When done lay on toast, and pour over a sauce made of two tablespoonfuls of butter, half pint of boiling water, half a lemon, tablespoonful of flour, half teaspoonful of salt and a dash of pepper. Place half of the butter in a stewpan, and when melted add the flour. Cook, but do not brown. When smooth add the boiling water. Simmer for ten minutes, stirring all the time, then add the butter left and seasoning. Serve at once.

APPLE CHARLOTTE.—Pare, core and quarter eight or nine good cooking apples, put them into a double boiler with two tablespoonfuls of butter, half a cup of sugar, the juice and grated rind of a lemon; cook until tender. Take a plain mould that holds three pints, butter it well, line the bottom and sides with very thin slices of home-made bread. Remove the crust, dip each slice in melted butter, fit them evenly together in the mould, fill with the apple, cover with the bread, dredge it with sugar and bake three-quarters of an hour in a quick oven. Have a hot platter, lay it over the top of the charlotte, turn it over, and lift off the mould. Serve hot with or without sauce or cream.

CUCUMBER SALAD.—Select three medium-sized cucumbers with small seeds, pare and cut a small piece from each end, and lay the cucumbers in strongly salted ice water for one hour or longer; ten minutes before serving take them out of the water, wipe dry and cut on a board with a sharp knife into fine slices; put them into a salad dish, sprinkle over a little salt and pepper, pour over two tablespoonfuls of salad oil and mix it with the cucumbers; then pour over one-half cup of white vinegar, to which a little water and a pinch of sugar have been added; if onions are liked, cut a medium-sized one into thin slices and put them between the cucumbers; some finely chopped parsley may also be added.

HE: "Yes, she is living under an assumed name." SHE: "Horrible! What is it?" HE: "The one she assumed immediately after her husband married her!"—Tit-Bits.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Aug. 28, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Dec.	May.
Wednesday.....	73 1/4 @ 73	75 3/4 @ 76 1/2
Thursday.....	72 3/4 @ 73 1/4	76 1/4 @ 77
Friday.....	73 1/4 @ 72 1/4	76 3/4 @ 76
Saturday.....	72 3/4 @ 72 3/4	76 3/4 @ 76 1/2
Monday.....	72 3/4 @ 71 1/4	76 1/4 @ 75 3/4
Tuesday.....	71 3/4 @ 72 1/4	75 3/4 @ 76 1/2

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	5s 6 1/2 d	5s 8 1/2 d
Thursday.....	5s 6 1/2 d	5s 8 1/2 d
Friday.....	5s 7 1/2 d	5s 8 1/2 d
Saturday.....	5s 7 1/2 d	5s 8 1/2 d
Monday.....	5s 7 d	5s 8 1/2 d
Tuesday.....	5s 6 1/2 d	5s 8 1/2 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 02 @	—
Friday.....	1 01 1/4 @	—
Saturday.....	—	—
Monday.....	1 01 3/4 @ 1 01 1/2	1 05 1/4 @ 1 05
Tuesday.....	1 01 1/4 @	—
Wednesday.....	1 01 1/4 @ 1 01 1/2	1 05 @

## WHEAT.

Although the outward movement of wheat from this port is not what it should be, and is far from what it would be if there were no strikes, there is a little improvement to record. One wheat ship was cleared from Port Costa on Friday last, being the first from that point the current month. There ought to be some very active loading of grain vessels during the next sixty days to offset the stagnation of the past month. There are now over forty ships in harbor under charter to carry wheat. This fleet has a carrying capacity of fully 125,000 tons. That this quantity of grain will be gotten afloat during September is doubtful, as the clearing of a ship a day for the entire month would not accomplish the task in question. There have been times in this port, however, when clearances for a month have averaged over one a day, two and three ships being occasionally cleared at a single date. There are vessels now bound this way sufficient to carry over 300,000 tons, which is considerably ahead of last year's supply. Buying has naturally been slow in this center, on account of the difficulty in moving grain. While the market has lacked firmness, quotable values have shown no appreciable change.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.02@1.01½.	
May, 1902, delivery, \$1.05½@1.05.	
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.01½@1.01½; May, 1902, \$1.05.	
California Milling, old .....	\$1 02½@1 05
Cal. No. 1 shipping, alongside.....	97½@ 98½
Oregon Valley.....	97½@ 1 02½
Washington Blue Stem.....	1 00 @ 1 05
Washington Club.....	97½@1 00
Off qualities wheat.....	95 @ 97½

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	68 3/4 d @ 68 1/2 d	68 1/2 d @ 68 1/2 d
Freight rates.....	38 1/4 @ —	37 1/4 @ 40 1/2
Local market.....	\$1 05 @ 1 06 1/4	96 1/4 @ 1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Trading in flour is far from active in this center. Most of the mills in this State, as also on the entire coast, have been lately closed down, and in consequence there is no great quantity of flour now moving forward. Spot stocks are sufficient, however, for a greater demand than exists. Quotations are unchanged, but there is more or less shading of rates in favor of buyers.

Superfine, lower grades.....	25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

Considerable barley has lately changed hands on export account, but owing to labor troubles it has been impossible to get much of it aboard ship. A part cargo of 2,700 tons, valued at \$48,700, was cleared the past week for United Kingdom. Some

barley is being forwarded by Panama and Cape Horn steamers, and shipments are being made to the East by rail. For desirable qualities of export and brewing grades the market is moderately firm at the figures quoted, and in some instances a slight advance on these prices is realized. Feed descriptions are not in as active request as the better grades, but the transfers effected in feed barley are in the main at fairly steady values.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	70 @ 72 1/2
Brewing, No. 1 to choice.....	77 1/4 @ 83 1/2
Chevalier, No. 1 to choice.....	1 00 @ 1 05
Chevalier, poor to fair.....	75 @ 90

## OATS.

While the market has not been noteworthy for activity, values have been tolerably well maintained at the range last quoted. Arrivals were of fair magnitude and were principally Reds, Blacks and Whites. There are scarcely any Grays or Surprise oats now on market, but wholesale offerings from Northern points of production are looked for soon.

White Oats, fancy feed.....	1 20 @ 1 25
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 15
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 22 1/2 @ 1 30
Black Russian.....	85 @ 1 15
Red.....	95 @ 1 25

## CORN.

Scarcity of supplies and stiff prices continue to be the prominent features of the corn market. Owing to the very scanty stocks, quotations for the present are largely nominal.

Large White, good to choice.....	1 70 @ 1 75
Large Yellow.....	1 65 @ 1 70
Small Yellow.....	1 65 @ 1 70
Eastern, in bulk (carload lots).....	1 60 @ —

## RYE.

Market is ruling very quiet, and the low range of values previously quoted continues in force.

Good to choice, new.....	77 1/4 @ 80
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## BUCKWHEAT.

Scarcely anything doing in this cereal, and little other at the moment upon which to base quotations than the views of buyers.

Good to choice.....	1 45 @ 1 60
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## BEANS.

The harvesting of beans has begun in the Sacramento river section, and sales are already reported. Some new Lady Washingtons are said to have changed hands at \$3.25, although old crop have been lately held up to \$4.25 per cental, and it is doubtful if purchases of choice old could now be made under \$4. No large arrivals of new are looked for before latter part of September or early October. In the meantime the market is likely to be more or less unsettled, which is natural at the opening of the season, especially with prices on a high plane, as they have been lately. There is no reason apparent, however, if undue pressure to realize is not exerted, why the market should develop any great weakness or why values should drop to low levels. Stocks of old are principally Lady Washingtons and Pinks, and are not heavy of these varieties.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 90 @ 5 00
Lady Washington.....	3 90 @ 4 10
Pinks.....	2 40 @ 2 50
Bayos, good to choice.....	2 75 @ 2 85
Reds.....	3 00 @ 3 25
Red Kidney.....	4 25 @ 4 50
Limas, good to choice.....	6 40 @ 6 50
Black-eye Beans.....	3 50 @ 3 75
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

## DRIED PEAS.

Market is quiet, offerings and inquiry being both light. Values are without quotable change, but for other than choice Green, full current figures are not readily realized. Niles peas are not receiving much attention, millers and jobbers being fairly stocked for the time being with this variety.

Green Peas, California.....	2 25 @ 2 50
Niles Peas.....	1 50 @ 1 75

## WOOL.

Demand continues lively for all desirable wools, fine free receiving the preference, and market is firm at prevailing quotations. Stocks here have been worked down to small proportions, leaving little opportunity for wholesale dealers to operate. Prospects are that Fall clip will speedily pass into second hands. Desirable clips are now being sought and purchased in the interior, dealers not waiting for the wool to arrive here.

## SPRING.

Humboldt and Mendocino.....	14 @ 16
Humboldt and Mendocino Lambs.....	11 @ —
Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13

Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Mountain, free.....	8 @ 10
San Joaquin and Plains.....	6 1/2 @ 8
San Joaquin Lambs.....	7 @ 9

## HOPS.

The new season is about to open, picking and curing being now in progress in most of the yards in this State. California hops are in the main turning out better, both as to quality and quantity, than last season, but in Oregon and Washington the reverse is the case, the crop being lighter and later in maturing. Values for new hops are not yet established. Dealers and growers are considerably apart in their views.

Good to choice 1901 crop.....	11 @ 13
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## HAY AND STRAW.

Not much hay is arriving for this time of year, for same reason previously stated, labor troubles preventing great quantities being handled. The producer is being seriously inconvenienced, as much hay which ought to be here and under shelter will be likely in the interior when the rainy season begins. The light business doing is at generally unchanged values, market showing steadiness for best qualities of both stable and cow hay.

Wheat, good to choice.....	7 50 @ 10 00
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 50 @ 9 00
Alfalfa.....	8 50 @ 10 50
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 3/4 bale.....	25 @ 40

## MILLSTUFFS.

Bran showed slightly increased receipts, but coming on a bare market, was readily disposed of, in fact, most of that coming forward had been placed prior arrival. All millstuffs continued to command high figures. Prices for Rolled Barley and Milled Corn were without special change, but stocks of latter were very light.

Bran, 1/2 ton.....	20 00 @ 21 00
Middlings.....	21 50 @ 23 00
Shorts, Oregon.....	20 00 @ 22 00
Barley, Rolled.....	17 00 @ 17 50
Cornmeal.....	33 00 @ —
Cracked Corn.....	34 00 @ —

## SEEDS.

Spot stocks of the several kinds quoted are of too slim proportions to admit of any wholesale trading. The little jobbing business doing is at figures much the same as have been current for some weeks past. There is virtually no Mustard Seed now here. It is doubtful if over 3c. could be realized for prime, either Yellow or Brown, but growers are contending for better figures.

Flax.....	2 50 @ 3 00
Canary.....	3 1/4 @ 3 1/2
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

## BAGS AND BAGGING.

The Grain Bag market is quiet and inclines in favor of buyers, although quotable values remain nominally as before. Wool Sacks are ruling steady and are in fair request. Fruit Bags are just now receiving considerable attention, but the supply is proving ample for the demand.

Calcutta Grain Bags, spot.....	7 1/2 @ 8 1/2
San Francisco Grain Bags, 2x36, spot.....	7 1/2 @ 8
Wool Sacks, 4 lbs.....	3 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 31
Fleece Twine.....	8 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	5 1/2 @ 5 1/2
Fruit Sacks, cotton.....	6 @ 6 1/2

## HIDES, PELTS AND TALLOW.

There is a moderate volume of business in Hides at generally unchanged rates, values ruling steady. Tallow is meeting with custom about as promptly as received, previous values remaining in force.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culle.
Heavy Steers, over 56 lbs.....	10 1/4 @ —	9 @ —
Medium Steers, 48 to 56 lbs.....	9 1/4 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/4 @ —	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/4 @ —	8 @ —
Wet Salted Kip.....	9 1/4 @ —	8 1/4 @ —
Wet Salted Veal.....	9 1/4 @ —	8 1/4 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	— @ —
Salted Horse Hides, medium.....	2 00 @ —	— @ —
Salted Horse Hides, small.....	1 00 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 00 @ —	— @ —
Dry Colts' Hides.....	50 @ —	— @ —
Pelts, long wool, 1/2 skin.....	75 @ —	— @ —
Pelts, medium, 1/2 skin.....	50 @ —	— @ —
Pelts, short wool, 1/2 skin.....	30 @ —	— @ —
Pelts, shearing, 1/2 skin.....	10 @ —	— @ —
Deer Skins, best summer.....	35 @ —	— @ —
Deer Skins, good medium.....	— @ —	30 @ —
Deer Skins, thin winter.....	— @ —	10 @ —

Elk Hides.....	10 @ 12
Tallow, good quality.....	4 1/4 @ 4 1/2
Tallow, No. 2.....	4 @ 4 1/4
Goat Skins, perfect.....	30 @ 37 1/2
Goat Skins, damaged.....	10 @ 20
Kid Skins.....	5 @ 10

## HONEY.

A heavy shipment of Extracted honey was made to Europe the past week, the steamer Anubis in the new German line taking 630 cases for Holland and 250 cases for Germany. Offerings of new are principally Extracted. While there is a fair demand, buyers are very conservative in their ideas of values, and bid, as a rule, under rather than up to or above quotations.

Extracted, White Liquid.....	5 1/2 @ —
Extracted, Light Amber.....	4 1/4 @ —
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7 1/2

## BEESWAX.

Market is very lightly stocked and cannot be said to favor buyers. Quotable values remain as before.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

No great changes have taken place in quotable values or the general tone of the market since last report, but the general tendency was to easier figures, especially for Beef. Mutton was in moderate receipt and commanded barely steady prices. Veal was in light supply, but was not quotably higher. Lamb now offering is mostly too large to be especially sought after. Hogs are not arriving very freely and market is tolerably steady at the quotations.

Beef, first quality, dressed, net 1/2 lb.....	6 @ 6 1/2
Beef, second quality.....	6 @ —
Beef, third quality.....	5 1/2 @ —
Mutton—ewes, 6 1/2 @ — c; wethers.....	6 1/2 @ 7
Hogs, hard grain fed, medium.....	6 1/2 @ 6 1/4
Hogs, small, fat.....	6 1/2 @ 6 1/4
Hogs, large, hard.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	7 1/4 @ 7 1/2
Veal, small, 1/2 lb.....	9 @ 10
Veal, large, 1/2 lb.....	7 1/2 @ 8
Lamb, spring, 1/2 lb.....	7 1/2 @ 8

## POULTRY.

Choice Young Chickens, medium size to full grown, were not in excessive receipt, and sold to very fair advantage, the demand being mainly for poultry of this description. Common old and small young did not sell readily and as a rule went at rather low figures. Ducks and Geese did not meet with much attention. Pigeons were in light demand and lower.

Old Turkeys, live hens, 1/2 lb.....	10 @ 12
Old Turkeys, live gobblers, 1/2 lb.....	8 @ 10
Hens, California, 1/2 dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 50 @ 5 50
Fryers.....	4 00 @ 4 50
Broilers, large.....	3 50 @ 4 00
Broilers, small.....	2 00 @ 3 00
Ducks, old, 1/2 dozen.....	3 00 @ 3 50
Ducks, young, 1/2 dozen.....	3 50 @ 4 50
Geese, 1/2 pair.....	1 50 @ 1 75
Goslings, 1/2 pair.....	1 50 @ 1 75
Pigeons, old, 1/2 dozen.....	1 50 @ 1 75
Pigeons, young.....	1 25 @ 1 50

## BUTTER.

While prices for fresh butter were on a higher plane than last quoted, the market for other than strictly choice to select fresh could not be termed firm. Cold storage supplies are being drawn upon and are taking, to a great extent, the place of fresh other than fancy.

Creamery, extras, 1/2 lb.....	26 @ —
Creamery, firsts.....	23 @ 24
Dairy, select.....	22 @ 23
Dairy, firsts.....	20 @ 21
Dairy, seconds.....	18 @ —
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/2

## CHEESE.

Market is showing healthy condition, being firm at the quotations, with stocks only moderate and fairly good demand. Values are at a little higher range than last quoted, and in a small way an advance on these figures is being realized.

California, fancy flat, new.....	11 @ —
California, good to choice.....	10 @ 10 1/2
California, fair to good.....	9 1/2 @ 10
California Cheddar.....	— @ —
California, "Young Americas".....	11 @ 11 1/2

## EGGS.

Higher prices are ruling for fresh, but only for most select stock can the market be termed particularly firm. Eastern eggs are not now in heavy receipt, being held rather firm at primary points. There are large stocks of cold storage, however, both domestic and Eastern, and owners are anxious to reduce holdings.

California, select, large, white and fresh.....	26 @ 27
California, select, irregular color & size.....	24 @ 25
California, good to choice store.....	20 @ 22 1/2
Eastern, good to choice.....	19 @ 21
Cold Storage.....	19 @ 21

## VEGETABLES.

Most kinds in season were in fairly lib-



eral receipt, and prices ranged much the same as were current preceding week, there being few decided changes in quotations. Onions continued in active request for shipment, and although arrivals were large, the supply was hardly equal to the demand at prevailing values. Tomatoes were in materially increased receipt and market was easier. Green Corn was in better demand and market firmer. Green Peppers continued plentiful and cheap.

Asparagus, $\frac{1}{2}$ box.....	— @ —
Beans, String, $\frac{1}{2}$ lb.....	2 @ 3
Beans, Lima, $\frac{1}{2}$ lb.....	2 @ 3
Beans, Wax, $\frac{1}{2}$ lb.....	— @ —
Cabbage, choice garden, $\frac{1}{2}$ 100 lbs...	55 @ 65
Cauliflower, $\frac{1}{2}$ dozen.....	40 @ 50
Corn, Green, $\frac{1}{2}$ sack.....	50 @ 75
Corn, Green, Alameda, $\frac{1}{2}$ large crate. 1 00	@ 1 25
Cucumbers, Bay, $\frac{1}{2}$ large box.....	25 @ 40
Egg Plant, $\frac{1}{2}$ box.....	35 @ 50
Garlic, $\frac{1}{2}$ lb.....	2 @ 3
Okra, Green, $\frac{1}{2}$ box.....	40 @ 70
Onions, Yellow Danver, $\frac{1}{2}$ cental.....	1 00 @ 1 10
Peas, Sweet garden, $\frac{1}{2}$ lb.....	2 @ 2 1/2
Peas, good to choice, $\frac{1}{2}$ sack.....	— @ —
Peppers, Green Chile, $\frac{1}{2}$ sack.....	30 @ 50
Peppers, Bell, $\frac{1}{2}$ box.....	40 @ 60
Squash Summer, $\frac{1}{2}$ small box.....	25 @ 40
Summer Squash, Bay, $\frac{1}{2}$ large box.....	50 @ 75
Tomatoes, $\frac{1}{2}$ large box.....	50 @ 1 25
Tomatoes, $\frac{1}{2}$ small box.....	30 @ 65

POTATOES.

It is doubtful if there was ever a more active shipping demand for California potatoes than is being experienced this season. For weeks past dealers have had more orders from the East than they could conveniently handle or promptly fill, and this in the face of very liberal arrivals. The market is decidedly firm, and indications are that demand will continue good the entire season, with prices little if any lower for desirable stock than lately current. Sweets are in fair receipt from Sacramento river and Stockton and are selling at rather low figures.

Burbanks, Salinas, $\frac{1}{2}$ 100 lbs.....	1 45 @ 1 60
San Leandro, in sacks, $\frac{1}{2}$ cental.....	1 40 @ 1 60
River Burbanks in sacks, $\frac{1}{2}$ cental.....	1 25 @ 1 40
Mission Garnet Chile, in sacks.....	1 25 @ 1 40
Sweets, new, $\frac{1}{2}$ cental.....	75 @ 1 25

The Fruit Market.

FRESH FRUITS.

There were fairly liberal receipts of most kinds of fresh fruit now in season, but a large proportion of offerings averaged decidedly ordinary in quality. For seriously defective stock, over-ripe, small size, showing scale or other disease, the market was slow and weak, poor fruit receiving no marked attention, even at low figures. For good to choice of most kinds, however, there was no lack of demand, such bringing as a rule fairly good prices. Clingstone Peaches of high grade were in active request on canning account and were favored with a firm market, being quotable up to \$50 per ton, with an advance on this figure possible for extra select. Freestone Peaches in bulk were hardly quotable over \$25 per ton, although for some very choice a higher price was realized. Choice to fancy Bartlett Pears were scarce and salable to advantage, but ordinary qualities were in excessive supply and cheap. Apples ruled much the same as last quoted, with market firm for best stock, but weak and dull for poor and faulty. Plums and Prunes were not in heavy receipt and for desirable qualities the market inclined in favor of sellers, there being a very fair demand, both for canning and immediate use. Table Grapes were in increased supply and market was easier, especially for other than choice Seedless, these being most in favor. Berries were in light supply and prices averaged somewhat better than preceding week, but the demand at extreme figures was not very brisk. Melons of all kinds were plentiful and went at generally easy rates, the weather much of the time being too cool for consumers to partake freely of this class of fruit.

Apples, Gravenstein, $\frac{1}{2}$ 4-tier box...	90 @ 1 25
Apples, Alexander, $\frac{1}{2}$ 50-lb. box.....	50 @ 1 00
Apples, green, $\frac{1}{2}$ small box.....	25 @ 40
Blackberries, $\frac{1}{2}$ chest.....	3 50 @ 5 00
Cantaloupes, $\frac{1}{2}$ crate.....	40 @ 75
Figs, 1-layer box.....	50 @ 75
Grapes, Seedless, $\frac{1}{2}$ crate.....	1 00 @ 1 25
Grapes, Black, $\frac{1}{2}$ crate.....	50 @ 75
Grapes, Fontainebleau, $\frac{1}{2}$ crate.....	50 @ 75
Grapes, Muscat, $\frac{1}{2}$ crate.....	50 @ 75
Grapes, Tokay, $\frac{1}{2}$ crate.....	50 @ 85
Logan Berries, $\frac{1}{2}$ chest.....	— @ —
Nutmeg Melons, $\frac{1}{2}$ crate.....	30 @ 50
Peaches, $\frac{1}{2}$ box.....	30 @ 65
Peaches, Freestone, $\frac{1}{2}$ ton.....	20 00 @ 25 00
Peaches, good to choice Cling, $\frac{1}{2}$ ton	35 00 @ 50 00
Pears, Bartlett, $\frac{1}{2}$ ton.....	15 00 @ 35 00
Pears, Bartlett's, $\frac{1}{2}$ 40-lb. box.....	50 @ 1 25
Pears, other kinds, $\frac{1}{2}$ box.....	35 @ 60
Plums, Green Gage, $\frac{1}{2}$ ton.....	15 00 @ 20 00
Plums, large size, $\frac{1}{2}$ ton.....	20 00 @ 22 50
Plums, $\frac{1}{2}$ crate.....	35 @ 65
Prunes, $\frac{1}{2}$ crate.....	40 @ 75
Quinces, $\frac{1}{2}$ box.....	50 @ 75
Raspberries, $\frac{1}{2}$ chest.....	5 00 @ 7 00
Strawberries, Longworth, $\frac{1}{2}$ chest.....	5 00 @ 7 00
Strawberries, Large, $\frac{1}{2}$ chest.....	4 00 @ 5 00
Watermelons, $\frac{1}{2}$ 100.....	5 00 @ 20 00
Whortleberries, $\frac{1}{2}$ lb.....	6 @ 8

DRIED FRUITS.

The market for cured and evaporated fruits continues strong, with an active demand for nearly every description, and is less favorable to the buying interest than a week ago. Inquiry has been particularly active for Apples, Apricots and Peaches. There are very few Apricots now offering from first hands, nor is there any probability of the market being burdened with desirable qualities of this fruit during the balance of the season. Apples are selling readily at better average prices than last quoted, choice to fancy evaporated in 50-lb. boxes commanding 8@8 1/2c. in a wholesale way. Sun-dried sliced in sacks were placed from first hands at 4 1/2c. Peaches have been changing hands quite freely, and more than were obtainable of No. 1 to fancy quality could have been readily placed at full current rates. It is estimated that fully 75 per cent. of the entire dried peach product of the State has already been disposed of, and some claim that not over 15 per cent of the entire California dried peach output of the current season is now in the hands of growers. Pears are in such light stock, especially choice to select quality, that they will figure more as a luxury than as a staple this season. Pitted Plums are not offering in heavy quantities from either first or second hands, and current values are being well sustained. Figs are meeting with a fair movement at quotably unchanged rates, but market is firm at the prices current. Bricks in 10-lb. boxes are bringing wholesale 7 1/2c. per lb. f. o. b. at packing point. New Prunes are on the market in light quantity and a few have been already shipped, but prices for this year's California product have not yet been established. There is talk of 3 1/2c. for Santa Clara 4's of this year, but future deliveries of some of the outside districts are going at 3c. Last year's prunes are selling on basis of 3 1/2c. for the four sizes, Santa Clara district, 3c. for the other districts.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 1/2 @ 8
Apricots, Royal, choice, in sacks, $\frac{1}{2}$ lb.....	9 @ —
Apricots, Moorpark.....	10 @ 13
Apples, in 50-lb boxes, rings, pressed, fancy.....	8 @ —
Apples, 50-lb boxes, rings, pressed, good to choice.....	7 1/2 @ —
Figs, pressed.....	5 @ 8
Nectarines, $\frac{1}{2}$ lb.....	6 @ 7 1/2
Peaches, unpeeled, fancy.....	7 1/2 @ 8
Peaches, unpeeled, choice.....	6 @ 6 1/2
Peaches, peeled, in boxes.....	12 @ 14
Pears, halves, choice to fancy.....	7 @ 8
Plums, Black, pitted.....	4 @ 4 1/2
Plums, White and Red.....	6 @ 7
Prunes, Silver.....	5 1/2 @ 6 1/2

COMMON SUN-DRIED.

Apricots.....	6 @ 7
Apples, sliced.....	3 @ 3 1/2
Apples, quartered.....	3 @ 3 1/2
Figs, Black.....	3 1/2 @ 4
Figs, White.....	3 1/2 @ 4
Peaches, unpeeled.....	5 @ 6
Pears, prime halves.....	5 @ 6

RAISINS.

Last year's raisins are virtually all out of first hands, the Growers' Association having no more to offer. The announcement of prices for dew crop is looked for at an early date. In a sample way new Sultanias are now on the market.

CITRUS FRUITS.

Oranges are still on market and are offering at a wide range of prices, owing to great difference in quality, but there is so little demand for them at present that they may be said to be out of season. Lemon market was quiet, and while there were no special changes in quotable rates, there was a lack of firmness. Limes were offered at a sharp decline, under increased offerings and a slow demand.

Oranges—Valencias, $\frac{1}{2}$ box.....	2 50 @ 3 50
Lemons—California, select, $\frac{1}{2}$ box.....	3 50 @ —
California, good to choice.....	2 50 @ 3 00
California, common to fair.....	1 25 @ 2 25
Limes—Mexican, $\frac{1}{2}$ box.....	3 50 @ 4 00

NUTS.

Spot stocks of both Almonds and Walnuts are too light to admit of any noteworthy trading. There are a few Chile Walnuts on the market which are selling at 9c. With ordinary Chile Walnuts selling at 9c., choice California should be worth 12c. The opening of the second set of bids on this year's crop of the Contra Costa Almond Growers' Association takes place Saturday, the date of this issue of the PACIFIC RURAL PRESS. Peanut market is without change, values ruling steady, with no heavy offerings of the ground nut, either domestic or imported.

California Almonds, shelled.....	18 @ 22
California Almonds, paper shell, $\frac{1}{2}$ lb.....	12 @ 14
California Almonds, soft shell.....	10 @ 12
California Almonds, hard shell.....	6 @ 7
Peanuts, California, fair to prime.....	4 1/2 @ 5 1/2
Peanuts, Eastern, hand-picked.....	5 1/2 @ 6
Pine Nuts.....	5 @ 6

WINE.

With virtually no wine at present offering from growers, values are necessarily

difficult to name. For dry wines of last year's vintage quotations continue nominally 22@25c. per gallon. Interest just now is centered in price of grapes. For upland dry wine grapes, running 22 to 28 per cent sugar, the market promises to rule firm at \$22@25 per ton, with possibility of extra choice lots selling higher. Grapes grown on low lands, with light percentage of sugar, may sell down to \$20 per ton or less. The steamer Argyll, sailing Saturday last for Panama, carried 112,427 gallons and 22 cases wine for New York. As to prices for sweet wine grapes, a Fresno dispatch, dated 26th inst., says: The California Wine Association to-day announced that they would pay the following prices for wine grapes up to the first of October: Black and Faherzagos, \$15 per ton; Sultanias, \$14; Malagas, \$13; Muscats, \$11. Last season the price of second crop Muscats was \$11, and the figures for the others are about the same. It was expected that the prices would be higher, for it is said there is a shortage in the north.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{4}$ sacks.....	105,832	821,685
Wheat, centals.....	31,370	496,410
Barley, centals.....	59,290	389,440
Oats, centals.....	26,005	156,486
Corn, centals.....	200	12,675
Rye, centals.....	1,300	6,655
Beans, sacks.....	954	16,515
Potatoes, sacks.....	37,332	198,044
Onions, sacks.....	6,269	49,041
Hay, tons.....	2,313	22,204
Wool, bales.....	1,434	12,079
Hops, bales.....	11	291

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{4}$ sacks.....	151,104	643,056
Wheat, centals.....	1,120	396,703
Barley, centals.....	91,817	144,753
Oats, centals.....	405	630
Corn, centals.....	556	7,026
Beans, sacks.....	66	753
Hay, bales.....	610	2,417
Wool, pounds.....	168,700	233,621
Hops, pounds.....	2,334	16,574
Honey, cases.....	905	1,374
Potatoes, pack's.....	433	7,242

California Dried Fruit at New York.

NEW YORK, Aug. 28. — Evaporated apples, common, 5@7 1/2c; prime wire tray, 8@8 1/2c; choice, 8@9c; fancy, 9 1/2c. California Dried Fruits.—A fair demand, with no heavy offerings, and market firm at prevailing rates. Prunes, 3 1/2@7c. Apricots, Royal, 8 1/2@13c; Moorpark, 9 1/2@14c. Peaches, unpeeled, 7@9 1/2c; peeled, 11@15c.

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## FRUIT MARKETING.

### The Raisin Situation.

The future of the Raisin Growers' Association is in the balance, and those who see in the maintenance of the Association the only way to escape the ills which caused its organization are doing active missionary work. Meetings are being held in various places, and the account of one at Hanford is described by the Sentinel of last week. Vice-President Biddle showed that the old contract could not be enforced, as there are but about 65% of the raisins of California that are now signed under it. This condition will not comply with the agreement between the packers and the Association. When the growers in the general meeting held last April adopted the present policy which is embodied in the new contract, they elected the present Board to proceed on the present plan, and it now lies with the growers to sign the new contract, and not to delay in doing so. The new contract has been revised and perfected until, in the opinion of the best legal minds, it absolutely places the ownership and control of the raisins signed to the Association under its power, and with 75% of the California raisin acreage signed the Association, through its Board of Directors, will have absolute control of the product. Mr. Biddle laid stress upon the point that those who signed the new contract and lived up to its requirements would never realize any difference between it and the old contract. There were certain new things put into the new contract for the purpose of fortifying the Association and making it stronger in case litigation should occur in the courts for the enforcement of the rights of the growers through the Association. Unless 75% of the acreage is signed within twenty days, the directors will quit the fight, and the Association will wind up the business and the Association will be a thing of the past. He spoke of the outside influences now at work through the district from outside firms offering to contract at Association prices, and warned the growers that if the Association was not maintained, and the necessary percentage of the acreage signed up, the Association would be defunct and there would be no price schedule established—all would be in the same leaky boat that sent growers up Salt river before the Association was organized.

D. D. Allison, an anti-Kearneyite grower from Fresno, explained how he had fought the new administration up to the time that it was installed, and then, finding himself in the minority, has taken off his coat and yielded to the desire to keep the Association strong, regardless of what his personal dislikes were to the members of the new Board. He took his medicine when the majority showed up against him and resolved by all means to accept a good and profitable price for his raisins rather than to gratify his personal objections to some minor matters and be sent back to the disasters of years gone by.

Mr. Allison spoke at length. He was followed by Alex. Gordon, who stated that he was a "scraper" against Kearney and still had no use for him, but he has for the Raisin Growers' Association, four of the directors of which are here, one in Germany and one in New Jersey. He believes in the four at home; and while he does not substitute the new contract for his Bible, he can see nothing in it that is objectionable. He stated the case plainly when he showed that, out of 2500 raisin growers, a majority of whom supported the Kearney ticket last April, less than one-sixth had signed the new Kearney contract. While he had not, prior to

the majority decision, supported the plan of the Kearney faction, he is willing to stand in now and preserve the Association because the latter has blazed the pathway of success for the raisin grower, and without its aid there is no hope.

Mr. Robert Boot, one of the directors of the Board, explained in response to questions that the new contract lease, relating to the personal conduct of the grower's own vineyard, does not say how an owner carries on his vineyard operations. The grower may feed his grapes to the hogs, he may neglect to cultivate his vines, he may do anything with the crop he wishes until he comes to sell his raisins, when under the new contract he must sell at Association prices through that organization. When it comes to wineries he must also sell at prices fixed by the Association.

### Prunes in Hungary.

Special Consular Report received by the Pacific Commercial Museum of San Francisco, Aug. 21.

F. D. Chester, United States Consul at Budapest, the capital of Hungary, states that Budapest has ceased to be the east European prune market. Prices began to be made last year at Save Station (i. e., from the producing district just below the Save river, in Bosnia and Servia), instead of at Budapest, inasmuch as freight rates from the former were no higher for direct shipment than rates from the latter point.

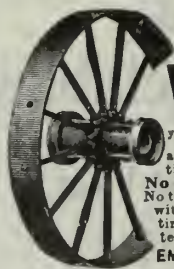
Moreover, the crops of the United States, France and Germany proved so good as to cause a decrease of the total export to outside countries from the combined district of Hungary (including Slavonia), Bosnia and Servia, the trade being, technically speaking, only "weaker."

The prediction to date is of a poorer crop than last year's, viz.: Bosnian crop, medium; Servian, weak medium. The prospect is of a less than average crop for the combined district above mentioned. Last year's crop is about consumed, which was only medium, so there is no old stock.

The crop in France promises to be poor, hence no export to that country is expected with which the United States ought to compete.

Owing to there having been a bad crop last year, and there being no prospect for a good one this year, American growers ought to be able to export prunes to this country, competing with Bosnia and Servia. The largest import into Hungary was in 1898, a year after import began from the United States, being as high as 48,937,490 pounds; but, owing to the reason given at the beginning of this report, the import dwindled in 1900 to about one-seventh of that weight, as did also the export. In other words, the Hungarian dealers in losing their grasp on the distributing trade in Bosnian and Servian prunes have most certainly opened the way to receiving consignments of the California article, of which samples have already been shown at the Budapest Produce Exchange.

The countries to which the Budapest distributors of Bosnian and Servian prunes sold largest during the years 1897-1899 are Germany and Belgium. It is for the United States exporters to weigh the advantages of meeting the Hungarians at the selling price (Budapest), or at the buying places in northern Europe.



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### Bosnian and Servian Prunes.

Special Consular Report received by the Pacific Commercial Museum of S. F., August 21st.

Christian Vogeli, U. S. Consul at Belgrade, Servia, says: Since the June report the prospects for the prune crop in Servia have not improved. Instead of warm, dry weather, favoring the fruit, it has rained continually for fourteen days and in some districts the hail destroyed all hope for the harvest. In fact, in Schabatz, the most important district for prunes, they won't get even half of last year's crop; in some other districts, less important, it looks a little better but the general prospects are very bad.

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## THE VETERINARIAN.

### What Dr. Koch Said About Tuberculosis.

We recently gave an outline of Dr. Koch's position as to the difference between tuberculosis in the human and the bovine species, and promised fuller account when available. In his London address before the British Tuberculosis Congress Dr. Koch said the sputum of consumptive people is to be regarded as the main source of the infection of tuberculosis. On that point he supposed all were agreed. The question now arose as to whether there were not other sources, too, copious enough to demand consideration in the combating of tuberculosis. Great importance used to be attached to the hereditary transmission of tuberculosis. Now, however, it has been demonstrated by thorough investigation that though hereditary tuberculosis was not absolutely non-existent, it was nevertheless extremely rare, and we were at liberty in considering our practical measures to leave that form of origination entirely out of the account.

Another possibility of tubercular infection existed, it was generally assumed, in the transmission of germs of the disease from tubercular animals to man. This manner of infection was generally regarded nowadays as proved and so frequent that it was looked upon by not a few as the most important, and rigorous measures were demanded against it in this congress. The discussion of the danger with which tuberculosis of animals threatened man would play an important part now, as his suggestion had led him to form an opinion deviating from that which was generally accepted. He begged their permission, in consideration of the great importance of this question, to discuss it a little more thoroughly. Genuine tuberculosis had hitherto been observed in almost all domestic animals, and most frequently in poultry and cattle.

EXPERIMENTS PROVE DIFFERENCE.—Describing the experiments made to determine the difference between human and bovine tuberculosis, Dr. Koch said: "A number of young cattle which had stood the tuberculin test, and might, therefore, be regarded as free from tuberculosis, were infected in various ways with pure cultures of tubercle bacilli taken from cases of human tuberculosis. Some of them got tubercular sputum of consumptive patients direct. In some cases tubercle bacilli, or sputum, were injected under the skin, in others into the peritoneal cavity, in others in the jugular vein. Six animals were fed with tubercular sputum almost daily for seven or eight months. Four repeatedly inhaled great quantities of bacilli which were distributed in water and spattered with it in the form of spray. None of these cattle, and there were nineteen of them, showed any symptoms of the disease, and they gained considerable in weight. From six to eight months after the beginning of the experiments they were killed, and in their internal organs not a trace of tuberculosis was found.

"The result was utterly different, however, when the same experiment was made on cattle free from tuberculosis with tubercle bacilli that came from the lungs of animals suffering from bovine tuberculosis. After the incubation period of about a week, the severest tubercular disorders of the internal organs broke out in all the in-

fectured animals. After death extensive tubercular infiltrations were found at the place where injections had been made and in the neighboring lymphatic glands, and also far advanced alterations of the internal organs, especially the lungs and spleen. The difference between human and bovine tuberculosis appeared not less strikingly in similar experiments with asses, sheep and goats, into whose vascular systems the two kinds of tubercle bacilli were injected. These experiments were not the only ones that have led to this result."

CAN COWS INFECT MEN?—Regarding a question which has been, and will continue to be, the subject of very earnest discussion, Dr. Koch said:

"Now, how was it with the susceptibility of man to bovine tuberculosis? This question was far more important to us than that of the susceptibility of cattle to human tuberculosis? Highly important as it was, it was impossible to give this question a direct answer because, of course, experimental investigation of it with human beings was out of the question.

"Indirectly, however, we could try to approach it. It was well known that milk and butter consumed in great cities very often contained large quantities of the bacilli of bovine tuberculosis in living condition, as numerous infection experiments with such dairy products on animals had proved.

"Most of the inhabitants of such cities consumed such living and perfectly virulent bacilli of bovine tuberculosis, and unintentionally carried out the experiment which we were not at liberty to make. If the bacilli of bovine tuberculosis were able to infect human beings, many cases of tuberculosis caused by the consumption of aliment containing tubercle bacilli could not help but occur among the inhabitants of great cities, especially children. Most medical men believe this is actually the case. In reality, however, it is not so.

RARELY, IF EVER.—"What had hitherto resulted from this investigation did not speak for the assumption that bovine tuberculosis occurred in man, though the important question whether man was susceptible to bovine tuberculosis at all was not yet absolutely decided, and would not admit of absolute decision to-day or to-morrow. One was nevertheless already at liberty to say that if such susceptibility really existed, infection of human beings was but a very rare occurrence. He should estimate the extent of infection by the milk and flesh of tubercular cattle and butter made of their milk as hardly greater than that of hereditary transmission, and he therefore did not deem it advisable to take any measures against it. So, only the main source of infection of tuberculosis was the sputum of consumptive patients, and measures for the combating of tuberculosis must aim at the prevention of dangers arising from its diffusion."



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## FARMERS SAY

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## Answers by Dr. Boomer.

### COW NEEDS TONING UP.

TO THE EDITOR:—I have a cow which calved all right and ever since she has commenced to go down. She had a cough, but it has all left her. There is a scale along her neck. Sometimes her nose is as dry as it can be, and at other times it is all right. She seems weak and does not seem to chew hay very well. She will pick up a bone or a piece of hard wood and chew on it for hours at a time. She was giving lots of milk, but has gone down in her milk and has gotten very poor in flesh. She does not act like a cow with consumption, but she seems to have no life in her at all.—SUBSCRIBER, Fern-dale.

In your cow's case the object will be to improve the process of digestion, so it will be necessary to supply the animal with sound, wholesome food. The following should be given to the cow three times a day. A tablespoonful, heaped, will be a dose: Powdered carbonate of iron 4 ounces, powdered gentiana 4 ounces, common salt 4 ounces, powdered fenugreek 4 ounces; mix. In addition to this give three tablespoonfuls of powdered charcoal, mixed in the feed, three times a day. Also place a piece of rock salt where the cow can lick it at will.

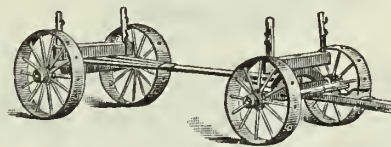
### TO REMOVE WARTS.

TO THE EDITOR:—Will you kindly inform me through your paper of some remedy that would remove warts from a cow's teats? Her teats are covered with them, and as they keep on growing they become quite a nuisance in milking.—OLD SUBSCRIBER, Grass Valley.

The warts may be entirely removed or the animal benefited by smearing them thickly with pure olive oil after each milking. If they persist, apply a solution of carbolic acid (about 1 to 4) with a brush, and take proper care that the solution is applied exclusively to the warts, without touching the surrounding skin. J. B. BOOMER, M. D. V.  
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### Farmers' Steamboat on the Sacramento.

The new big steamboat Valletta arrived at Sacramento Sunday night from Knight's Landing and other up-river points with its first cargo of freight, consigned to Port Costa. The Record-Union says: Captain Beach expected to reach Port Costa early Monday afternoon, and the arrival of the vessel was being awaited with considerable interest by the striking 'longshoremen and their friends. Some of the strikers have declared that the cargo cannot be discharged, while the shippers intimate plainly that they have made arrangements for the handling of the grain with promptness and dispatch.

The barley was shipped from the Miller ranch, about 15 miles north of Knight's Landing. The crew of twelve men, who shipped at San Francisco early in the week, loaded the vessel, and they will attend to the work of unloading at Port Costa. The crew, however, is in sympathy with the strikers, and a majority of the men declared that they would not do any 'longshore work. The spokesman said: "If the captain is counting on the crew to discharge the cargo into a deep-sea vessel, he'll find that he's badly fooled. We will put the grain on the dock, just as the crew on any other river boat would do, and there we will stop. We have talked it over, and have decided that we won't put the barley into a sling for a deep-sea vessel, and have everybody calling us 'scabs.'"

Captain Beach, however, says the grain will be taken care of when it arrives at Port Costa. When he put in he was running short of coal. When he started he felt satisfied that he had a sufficient quantity aboard to make the run to Port Costa; but he preferred to take no risks of a shortage. He went ashore as soon as the Valletta was made fast and went in search of a coal yard to replenish his bunkers before departing.

The Valletta was built at Benicia by W. D. Delaney, and is owned by a corporation of Sacramento and Colusa county farmers, known as the Farmers' Transportation Company. The vessel is 176 feet in length, 42 feet beam, 7½ feet deep, and 38 feet hull. Builder Delaney accompanied Captain Beach on the trial trip, which was made up the Sacramento river. He came down on the boat and expressed himself as highly pleased with the boat and its speed. "The Valletta has done everything we expected. It has done remarkably well," says Mr. Delaney.

### The Malarial Mosquito.

Recent scientific studies point quite decidedly to the idea that malaria is usually communicated by mosquito bites. Not all mosquitoes, however, are capable of communicating malaria. Only a single family—anopheles—has thus far been convicted of this nefarious business. But the family is a prolific one, forty different species being already known, of which ten have been recently discovered. There are four times as many species of the common mosquito (culex), however, so that we may consider ourselves fortunate that the insect with which we are best acquainted may generally be trusted to take his little drop of blood without leaving any horrible malarial parasite behind. It is a good thing, however, to know the difference between the harmless culex and the death-dealing

anopheles. Here are a few of the differences: Culex stands square and level on all-fours, with his bill pointing straight down, while anopheles has the appearance of a dog sitting down on his haunches, and thrusts his bill straight out in front of him. Culex sings with a high note, while anopheles has a low, funereal sort of hymn.

### San Francisco Boys in the Hop Fields.

James Dowdell of St. Helena was in Santa Rosa last week and was interviewed by the Democrat. On Mr. Dowdell's place thirty-two boys from the Catholic Youths' Directory in San Francisco are picking hops. The boys, whose ages range from twelve to eighteen years, are in charge of Rev. Father Crowley of San Francisco.

From Mr. Dowdell it is learned that the boys are getting along splendidly and he is well pleased with them. Father Crowley gets up at 6 o'clock in the morning and breakfasts and takes all his meals with his young charges, in whom he takes a deep interest. In the hop yard the boys are divided into companies of ten, and each company has a captain. The captain makes a daily inspection of his company to see that cleanliness is maintained and that everything is all right. Mr. Dowdell says perfect order is kept. Before Father Crowley and his small army arrived at the Dowdell place accommodations were all ready for their housing and entertainment. An experienced cook came with them and three fine meals are prepared daily.

Father Crowley's idea in taking the boys to the hop yard was not so much to have them earn money, but to give them an outing and an insight into a little hard work in the country besides. He is doing a noble work with the boys, who are receiving the benefits of a bringing up and education in the Directory. Father Crowley has a gigantic scheme in hand for the acquisition of about 2000 acres of land for the founding of a great institutional farm, upon which the land would be made to produce everything possible, and upon which the hundreds of boys coming under the care of the Directory could work.

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR WEEK ENDING AUGUST 13, 1901.

680,404.—BOTTLE—W. H. Aaron, Stockton, Cal.  
680,369.—FURNACE FIRE DOOR—F. L. Bates, S. F.  
680,371.—PRESS APPARATUS—H. M. Brittan, S. F.  
680,627.—MANFOLDING SHEET—H. P. Brown, S. F.  
680,319.—BOTTLE—S. W. Durham, San Jose, Cal.  
680,573.—OIL BURNER—J. Eastwood, S. F.  
680,375.—FRUIT GRADER—J. W. Fawkes, Sr., Burbank, Cal.  
680,456.—AIR BRAKE—Hickey & Kellogg, Tacoma, Wash.  
680,381.—SACK HOLDER—W. M. & C. C. Inman, Bishop, Cal.  
680,264.—BOOT DRIER—H. C. Mansfield, Chico, Cal.  
680,435.—FOUNTAIN COMB—J. G. McAlpine, Jr., Gilroy, Cal.  
680,344.—OIL RACK—L. K. Moore, Moro, Or.  
680,675.—WAIST LINING—J. Newbauer, S. F.  
680,352.—BOX OPENER—J. C. Patterson, Seattle, Wash.  
680,463.—BRACKET—F. H. Plalstridge, Los Angeles, Cal.  
680,363.—PAGE INDICATOR—R. Scott, North Yakima, Wash.

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The salary will be £500 per annum with rations, house and fuel. The term of engagement is five years, subject to satisfactory performance of duties. Applicants must be in good health and under 45 years of age. The passage of the successful applicant will be paid to South Australia, and his salary will commence on his arrival there.

Further information may be obtained upon application to the Honorable the Minister of Agriculture, Adelaide, or to the State Agent for South Australia, 1 Crosby Square, London, E. C., England. Applications will be received up to the 1st November, 1901.

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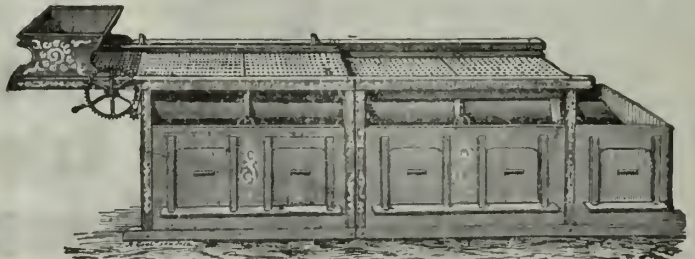
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## ENTOMOLOGICAL.

## Fumigation of Ornamental Plants.

By E. H. RUST, at the Meeting of the Nurserymen's Association.

Practical fumigation is of the utmost importance to the nurseryman. The pernicious insect by this treatment can be held in check, and, in some cases, eradicated. Greenhouses can be kept practically clean; but great care must be taken, or burned foliage and unsalable plants will be the result. I find the most satisfactory results are obtained by removing all badly infested plants and giving them several applications of gas in the fumigating room; then fumigate the houses, but do not use the gas strong enough to kill the old scale. Simply kill the young, and repeat the treatment often enough, so that there are none allowed to mature. There are some plants that cannot be fumigated with safety at all; the Pilea, or Artillery plant, is one. This plant is always killed. Plants such as Aralia sieboldi, Phylodendron, Sauseveria and Jacaranda are especially sensitive. Ferns that are making a rapid growth, or are in an unhealthy condition, should not be fumigated. This applies also to all kinds of asparagus and any plants of tender growth. Repotted plants should not be fumigated until they are thoroughly established; and no plants should be subjected to the gas when the foliage is wet.

If the stock is hardy, I use one ounce of the cyanide to 1000 cubic feet of space (750); but this same stock when tender will be ruined by using gas one-half the strength. I have burned the foliage of the Phoenix Canadian palms in the same house with maiden-hair ferns which were not injured at all. Fish in aquarium should be removed from the houses, as the gas will always kill them.

I have had the best results from fumigation by leaving the stock exposed to the gas for sixty minutes. A mild dose, if left in the house all night, is very satisfactory. There should be no fumigating in the daytime under glass.

The scale should be watched and when the greater per cent are hatched fumigation should be applied. In treating a large house it is better to place four or six jars for the chemicals, and in this way you get a more even distribution of the gas. It is a good idea to add extra water to the acid, as this causes the gas to generate slower. It is well to place a wet cloth over the generator as this seems to hold the gas in check and it escapes slowly; otherwise it goes with a rush, and burnt foliage is the result.

Hanging baskets and all plants near the roof should be lowered, as the gas is stronger in the upper part of the house. Never fumigate plants in the propagating pit, as it seems to prevent their rooting.

I find all stock does better by using light doses of gas often than by giving heavy treatment, even if it does not burn the foliage.

It is well to arrange the stock in the yards, so that plants that will bear the same treatment should be grouped together. In this way a tent can be used.

A few weeks ago I fumigated a lot of mixed stock; the eucalyptus, 4 feet high, were ruined, and the flame trees, laurestinas, guavas, bamboo and magnolias were not injured at all.

I have found fumigation the most satisfactory treatment for the eradication of scale; but it must be carefully done, or the results will be disastrous to greenhouse stock.

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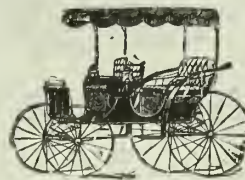
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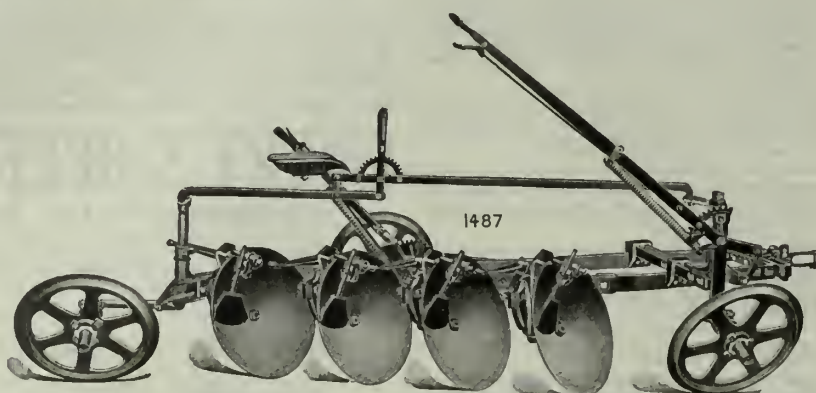


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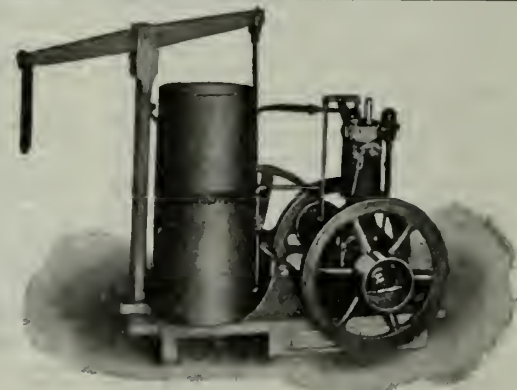
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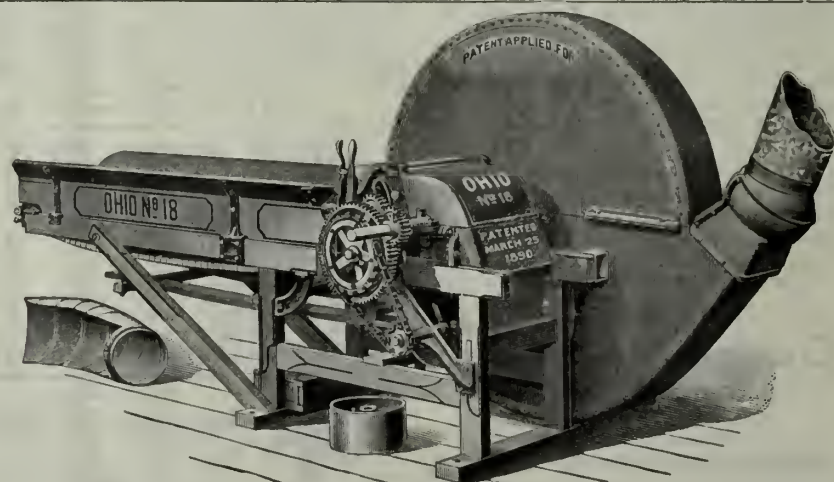
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 10.

SAN FRANCISCO, SATURDAY, SEPTEMBER 7, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### An Experiment Orchard.

The upper picture on this page shows one part of the orchard at the University branch station in Amador county. It is characteristic of the foothill region in its slopes, which have been cleared from a dense native growth. It is characteristic of an experiment orchard in its raggedness and inequality. It is particularly the latter feature which we would emphasize. An experiment station is a place to "try all things and hold fast that which is good," according to the old proverb, with this exception that the good things for the particular region hold fast for themselves and the others let go. For this reason any experiment orchard will be uneven and full of gaps and of trees and plants of all sizes. No good orchardist would have such a looking place, and to help him away from it the State tries the experiments and warns him against that which will fail. This land was planted with many varieties. All were given the excellent cultivation which the picture shows, but many have failed. An experiment station teaches as much by its failures as by its successes.



Partial View of the Orchard at the Experiment Station in Amador County.

### Beneficial Insects.

Recently we alluded to the important work of the State Board of Horticulture in excluding injurious insects and the striking success with which Mr. Alexander Crow pursues that work. It is timely to speak of another branch of Mr. Crow's work, and that is the introduction and distribution of beneficial insects. He has proved a most successful manipulator of the desirable forces which the traveling agents of the Board, notably Mr. Koebele and Mr. Compere, have secured by their patient investigations in foreign lands. His success in multiplying beneficial insects passes far beyond the most delight-

ful dreams of beginners in poultrydom, and with Mr. Crow it is pretty safe to count before the hatching, which does not work well with chicken estimates. Mr. Crow has not only successfully placed most, if not all, the importations which reached him alive, but he has multiplied them beyond all enumeration and has supplied thousands of growers with colonies for introduction to their orchards. It is wonderful that it has been possible to do so much with such inadequate facilities as Mr. Crow has had at his command

during the last few years. The picture on this page shows Mr. Crow's insectary at his office on Clay street dock in San Francisco. This consists of the collection of large jars in the left half of the picture. In these jars are placed the breeding colonies of the beneficial insects and they are supplied from time to time with branches infested with the particular scale or other insect which they thrive best upon. The tops of the jars are covered with fine gauze, which applies ample air for them; and as it is the typical

atmosphere of the San Francisco water front, a little of it seems to go a long way. At all events, the multiplication is wonderful, and furnishes colonies in large numbers. Sometimes Mr. Crow runs short of supplies for his insect boarding house, and has to rustle for it considerably.

The other division of the picture represents the collection of specimens of injurious insects and fungi taken from plants whose entrance was stopped, also some of the injurious animals which tourists are always bringing with them as curiosities or pets. One can get a good idea of the ruinous things which have been stopped at the gates through the maintenance of the quarantine at this port.



Insectary and Collection of Pests Prevented in the San Francisco Office of State Board of Horticulture.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, September 7, 1901.

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## The Week.

There has been another favorable week for the various efforts which belong to the closing of the harvest season. There have been good sunshine and sun heat and fruit drying has proceeded favorably. Threshing and hay baling have also made due progress. The great apprehension still is that the paralysis attending the strike will still cause immense loss to the farmers from injury to unsheltered crops by the early rains. Some are getting their produce under the best cover they can devise, thinking it may still be long before free movement in the markets can be counted upon. Others are taking the chances, hoping that the situation may soon clear, because of the evident desire of so many men to return to work and profit by the opportunities which are now open. These opportunities are, in fact, very large. There is a vast amount of work to be done and wages are beyond exception. It would certainly help the whole State to escape from the clutches which are now enforcing idleness and inviting misery. If industrial affairs clear soon and rains are ample, we shall have the greatest winter California has ever experienced. The tourist traffic will be immense, if the reports of local tumult be arrested. Produce prices, except for cereals, are unusually good, and everyone's disposition will be to push enterprise to its outer limits if regular commercial movements are free again. But now all is agog, and if a way is not soon found by which those who want to work may do so, the State will be hurt in ways which will require months to heal.

Wheat is dragging. There is little doing in spot, and futures are about as stagnant. There are some ships loading, but none have finished this week. There are now plenty of ships to take wheat, but it is hard to get it into them. Barley is a little more fortunate. Two steamers have taken about 11,000 tons and some has also gone by sail. The foreign malsters are anxious to get barley as soon as possible and more should be afloat. Prices are steady and well maintained for export barley. Oats are easier and tending downward owing to freer arrivals of new crop from the North. Corn is scarcer than ever. There is a little rye at Port Costa waiting to go aboard ship, but there is no telling when it will get away. Rye prices are low. Beans are quiet. Some new large whites and blackeyes are arriving, but

there is little doing yet, as stocks are light and buyers holding aloof. Millstuffs are still scarce and high. The best hay is firm, but all else is dragging. Dealers are counting on much damaged hay to result from strikers' interference and do not consider the outlook good for the lower grades. Beef is quiet and easy and mutton a little lower; hogs have shaded down slightly, but there is little packing yet. Butter is quiet and a little weak. Creamery is slightly lower. Cold storage butter slides out whenever fresh attempts to rise. Cheese is steady and in fair demand. The best eggs are firm and all are anxious to force them up to help out the stored eggs. Poultry is slow, except the very best. Potatoes went a little too high, but a return from this excursion found buyers eager and offerings readily taken for rail shipment. Onions are higher and going eastward and to Australia. Fresh fruits are selling well except that table grapes have dropped. Canners are freely taking what suits them. More is doing in citrus fruits but at a lower range. Limes are in heavy supply and are hurting lemons somewhat. Dried fruits are not quite so active but have a good tone—dried apples being particularly in demand. Prunes are selling at 3 to 3 1/2 c for the four sizes—small prunes bringing relatively more than large. There are no old raisins here. Walnut prices are expected within a week. Almonds have secured a little better bids than a week ago and some sales in the interior have been made. Hops are still in dispute. Wool is in good demand but there is little here. Buyers seem to be waiting for the better classes of the fall clip and ready to take it as fast as it arrives.

Mr. M. Theodore Kearney proposes what would be called in France a coup de main to bring the raisin growers to their senses. Our columns last week gave some account of the difficulty which is being met with in securing growers to sign up the leases of their places to the association. Mr. Kearney has been informed of that fact and proposes to fix things so that no one will buy raisins. He has informed the Eastern trade journals that if the growers fail to support the association by all signing the lease, the directors will enforce the association's rights to the control of the crop under the old contracts, and will fix a price of 2 cents a pound in the sweat box for this season's crop. He holds that no dealer will buy any raisins, inside or outside, at any higher price until this matter is settled. He thinks that such action may destroy a market for half the crop at anything above distillery prices, but better that than to see the association wrecked. The longer the delay now in signing the leases the greater the loss on the coming crop. It does not look very wholesome for co-operation when the force of organization is largely occupied in cracking the skulls of recalcitrant members, but it may be better to suffer a little now than a good deal more later on.

The fresh fruit overland trade has proceeded rather more quietly than usual this season. The Sacramento Bee has interesting figures for the season up to the close of last week. The total of the deciduous fruit shipments is 4101 cars, and to the same date last year it was 4634, a difference of 533. In view of the difference of one ton in the carload minimum this season the real difference in quantity shipped is considerably more. And last season, owing to the scarcity of cars, many cars were loaded considerably beyond the minimum of thirteen tons. It is not probable that weekly shipments will increase from this date, though those of grapes will be augmented when the Tokays from the American river district come in, which will be in a few days. And there will also be an increase in the late varieties of peaches. Fruit trains continue to fall behind schedule time to the extent of about two days to Chicago and other Eastern points, but as a rule the fruit has carried well this season, the service being much more expeditious than it was last year and the cars less heavily loaded, so as to allow plenty of room for ventilation.

The prune association is in about the same sheet of deep water in which the raisin association is reaching down for a footing. President Woods has issued a long circular with the idea of holding prune growers to their contracts and warning them that to sell un-

cured prunes outside may render them liable to prosecution. He reminds them that under the contracts they have signed they have the right to transfer prunes for 1901 to any member of the association, subject to the provision of the contract, or to canners for canning only, or for shipment for consumption green or to any packer who has signed the growers' contract with the association and covering the fruit so transferred. They cannot transfer prunes for 1901 to any member of the association except subject to the provisions of this contract. They can transfer only to a packer who has signed the growers' contract with the association and covering the fruit so transferred. They are also reminded that by the terms of the contract, "all of such transfers are to be reported by the party of the first part to the president of the association." It now devolves upon all who have sold to report to headquarters and they are officially notified to do so. This will test the whole matter. The answer to this circular will disclose the attitude of the growers to the association and that is important to know widely just at this time.

It is gratifying to know that Prof. Elwood Mead is able again to take up his work with his accustomed energy and speed. The reports of the Denver meeting of the American Association for the Advancement of Science show that Prof. Mead was present and taking part in the deliberations of that representative body. The reporters say that he is rapidly training his left hand to do the work of the missing right hand and the prospect is that it will soon strike the same gait. Prof. Mead will soon go to Washington to promote the interests of the irrigation development upon the attention of Congress.

An illustration of the esteem in which California agricultural experts are held abroad is found in the fact that Mr. F. F. Bioletti receives this week a cabled announcement from South Africa that he has been appointed to a position as instructor and expert in viticulture for a Government school. This vacancy was advertised all over the world, and no doubt nominations were made from all over the world. The compensation is liberal and the place in every way attractive. Mr. Bioletti's appointment is not only a recognition of the excellent work he is doing in California, but is also significant of the desire which the new fruit regions have to profit by California experience and success. It will be a loss to California to have Mr. Bioletti accept this position; but as the inducements are greater than our State offers, and the opportunity for satisfactory work and advancement excellent, it will be a loss which will have to be met and compensated for as well as it may be.

Wheat growers are urged to get in line and do something broadly for their own interests. A meeting will be held on Wednesday of next week, September 12, in Sacramento, in some hall to be publicly announced, to consider the propriety of perfecting an organization of wheat growers for mutual benefit. The growers are aware of the fact that, says a brief circular which we have seen, that in this day of organization they are further behind than any other industry in America. They must take what they are offered without knowing why the offer is high or low. It might be possible to so organize as to exploit markets; know where to sell and when to sell; know the state of the foreign markets and the condition of transportation. The circular proceeds to say that wheat growers "might even combine as fully as the prune and raisin interests." Just at the moment the illustration does not seem to shine very brightly, but it will be all right in the end. If the raisin and prune people do not stick together this year, they surely will later. There is no other recourse when they have taken medicine enough, and the wheat growers are on the same route. The State Fair should help to draw the wheat growers to the meeting we have announced.

The State Fair at Sacramento is getting into shape as we write on Wednesday. Early reports are favorable to a good display, though the disjointed times may interfere somewhat with its realization. The fair will be in progress all of next week and many of our readers should enjoy and profit by the occasion.



QUERIES AND REPLIES.

Tomatoes Under Glass.

TO THE EDITOR:—I have a ranch on the coast of Marin county, with plenty of water and wood at the cost of cutting. I have thought I might build a glass house and grow tomatoes under glass profitably. I have two places to put a glass house: one is in a ravine where I can get plenty of water by gravity, but in winter the sun sets pretty early; another is on a mesa, where it would get all the sun, but the water would have to be pumped. I would like to know whether you think hothouse products could be made profitable.—READER, San Rafael.

Growing vegetables under glass in California is a very precarious undertaking, because the product must be ready at a particular date in order to strike the market just between the late and early open-air products. If you could have everything just right and put a fine product of tomatoes on sale just at this time, the undertaking would be profitable; but if it should come too soon or too late, the market price would not meet the cost. As to the place which you mention on the coast, there are two objections. One is the existence of a lower winter temperature than is found in a more protected interior place; another is the frequent occurrence of cloudy or foggy days. Working under glass, you can regulate your temperature, of course, by firing; but good, effective light and sunshine are also conditions essential to the satisfactory growth of the plants. San Rafael would be incalculably better for the enterprise than the immediate coast side of the county. It is very unwise to undertake any considerable investment in this direction without experience as to just what can be done. You will find plenty of people who will tell you that the enterprise will not pay, and they will, as a rule, be quite right; but you can never know whether it will pay or not under the particular conditions which you provide and the date which you are able to reach with the product without an experiment. The only safe way for you to proceed would be to undertake to grow a few plants under glass, using all attainable data as to their treatment, and by this course you will have some evidence on which you can proceed with larger undertakings, if they seem justified.

Moth Catcher Destroying Beneficial Insects.

TO THE EDITOR:—I send you advertisement of a moth catcher. What is your opinion of it? Some of us apple and pear growers thought about giving it a trial; but I have read that it is liable to destroy beneficial insects as well as pests. Your opinion will be kindly received.—READER, Tres Pinos.

Our own observation supports the conclusion you mention. We have had a trap running in our own orchard, and in two nights caught one codlin moth, one cornworm moth, four lacewings and four ladybugs, without mentioning ichneumons and small parasitic wasps, which could not be called beneficial until it is determined what insects they prey upon. Taking the insects named above, however, we destroyed four times as many beneficial insects as injurious. We are not sure that we have yet done harm enough with the trap; we shall try it a few more times.

Brewing Barley.

TO THE EDITOR:—I send you two samples of barley—one from my place, a sample of 17,000 bags; the other sample is from Acampo. As I raise nothing but brewing barley, I am anxious to get the best with your help. Please let me know which is the better barley? If that from Acampo, I will buy enough for seed. It is a new kind of barley called Club barley.—READER, Undine, San Joaquin Co.

The two samples of barley have been submitted to San Francisco experts, who, after examination of the samples, do not hesitate to say that your own sample is superior to the one coming from Acampo. It is plumper, consequently contains a greater proportion of starch and would furnish a more vigorous sprout than would the other sample. In this consists its superiority for malting purposes. The slimmer grain resembles more closely that called the "shoe peg" type, and is to that extent deficient in starch and saccharine matter. So far as this judgment goes, you would have nothing to gain by using the seed from Acampo. Possibly, however, as you may have superior conditions for the growth of plumper grain, the product on your soil from the Acampo seed might be better than the seed itself,

and might, under those conditions, be better than the sample you sent of your own growth. This could only be determined by local experiment. This new kind of barley also may have advantages in point of yield or otherwise over that which you grow. The proper course then would be to secure a certain amount of the seed and grow it upon your own field and compare it next year with the old kind grown under the same conditions. If you should sow enough to give you seed for large planting next year, in case it were better, you would be in the way of making a most conclusive and practical demonstration of the matter.

The Codlin Moth.

TO THE EDITOR:—I have an apple and pear orchard in the Santa Cruz mountains and we are very much troubled with the codlin moth. We have been using every precaution against those destructive pests, but still they are very destructive on our fruit. We have been spraying with Paris green every twenty days. We also use burlap bands as traps on our trees and go over them every few days, yet still they come. How late in the season do the codlin moths lay their eggs? Some two years ago a man who claims to be good authority told me that the codlin moth did not lay any eggs after July, but I have come to the conclusion that he does not understand very much about the business. How late do you think it is necessary to spray?

We are also troubled with black scab on different varieties of apples. Skinner Seedlings and White Bellefleurs are about the worst. How would you fight the black scab?—JOHN WILLOUGHBY, San Jose.

You seem to be doing everything possible for the protection of your fruit against the codlin moth. Things to be observed in the pursuit of your plan of treatment would be to be sure that the Paris green is of good quality and that spraying is done late enough to save the winter fruit. We do not know just how late in the season the codlin moth lays her eggs, but it is a fact that the moths are now appearing in the orchard and will lay eggs, from which worms will appear in the late fruit. As it is now early in September your authority who said that eggs were not laid after July is evidently mistaken. Winter apples must certainly be sprayed as late as August to protect them against the last brood of worms. The apple scab is prevented by the use of the Bordeaux mixture. This should be used earlier in the season, and by adding one pound of Paris green to each 200 gallons of Bordeaux mixture you will poison the worm and prevent the scab at the same spraying.

Eucalypts for the San Joaquin.

TO THE EDITOR:—Will you kindly inform me, through the columns of your valuable paper, what, in your opinion, are the best varieties of eucalyptus to plant for windbreaks and fuel in the vicinity of Lodi, San Joaquin county. The principal service required would be for windbreaks, but would also like to have a variety good for fuel. There are a great many common "blue gums" in that country, but if there is a better variety than that one, would like to know it.—W. H. PEARSON, Lorin, Alameda county.

In the PACIFIC RURAL PRESS of January 26 ult. there was a very interesting article on eucalyptus in the San Joaquin which strongly approved the red gum (*Eucalyptus rostrata*). Both this and the common blue gum (*globulus*) are preferred by some growers to other species which they have tried, but we should certainly include viminalis and robusta in experimental plantations for shade and fuel and for tall windbreaks. We doubt, however, if there is a better single species for the region named than *rostrata*.

Kissing Bugs.

TO THE EDITOR:—I send by mail an insect which I think, from the description I have read, is a Kissing bug. Please advise me whether it is or not for the benefit of myself and friends.—ENQUIRER, Modesto.

The insect is the handsomest of the Kissing bug group and its full name is *Melanolestes abdominalis*.

What the Trap Caught.

TO THE EDITOR:—The moths I sent you and which you mentioned in Queries and Replies for August 24th, were caught in the orchard in a pan filled about two-thirds full of water with a little oil on top; the lighted torch and reflectors being above. It remained two nights without change and various moths were caught in the pan. I selected two kinds and sent them to you, one of which you named the codlin moth and we would be pleased to have you name the other. We thank you for verifying our belief, we thought all

the time we were catching the codlin moth, now we are sure of it.—A. A. HENRY, Arroyo Grande.

The other moth you sent with the codlins is *caradina flavimaculata*. It is a common moth and was collected and named long ago, but its character has never been made out and it has never been detected in evil work.

Another in Favor of Non-Rinsing.

TO THE EDITOR:—I notice in the issue of August 31 of the PACIFIC RURAL PRESS an article on "Lye Dipping Without Rinsing," by H. H. Hunting of Lodi. My experience tallies exactly with that article. We never rinse, but change water often and dip rapidly.—McCoy FITZGERALD, Redding.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending Sept. 4, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Conditions have been favorable for late peaches and grapes, but somewhat cool for fruit drying. Light showers have fallen in some sections and a thunder storm occurred on August 29 in the vicinity of Sacramento. Tokay grapes are being marketed in large quantities; they are of good quality, but lack the proper coloring. The grape crop is reported light in some sections, and nearly average in others. Oranges continue in good condition and nearly an average crop is expected. Almond picking is progressing. Sugar beets and hops are yielding good crops. Corn and vegetables are in good condition. Grain threshing continues.

COAST AND BAY SECTIONS.

The weather has been too cool for rapid fruit drying, but favorable for hops, corn and potatoes. Grain threshing is progressing rapidly in the central and southern counties, where heavy crops have been harvested. In some of the northern counties the yield of wheat and barley is light and threshing is completed. Shipments of grain and other produce continue light, owing to labor troubles. In San Benito county there are still large quantities of unthreshed grain and un-baled hay not under cover, and work is being rushed as rapidly as possible. Hops and sugar beets are doing well. Hop picking is progressing in some sections. There will be a heavy crop of beans in San Luis Obispo county. Late peaches are ripening. Grapes are in good condition. Citrus fruits continue thrifty.

SAN JOAQUIN VALLEY.

Clear, pleasant days and cool nights have prevailed during the past week. The grain harvest is practically completed in all sections and most of the crop is stored in the warehouses. The yield and quality are good. Deciduous fruits continue coming to canneries and driers in large quantities. Fruit shipments to Eastern markets continue good. Almond harvest is well along and the crop is very light. Sweet potatoes are being harvested and the crop will be good. Grapes are making good progress and picking has commenced in many localities. Stock are in good condition. Farmers are preparing for fall plowing.

SOUTHERN CALIFORNIA.

Clear, warm days and cool nights have prevailed during the week. Rain in the mountain districts has materially improved the water supply. Walnuts in some sections have been slightly damaged by heat, but a good crop is expected. Potatoes are yielding better than estimated. Navy beans will yield more than an average crop in some places. Sugar beets are in good condition and will yield a fair crop. Grape picking is progressing; the yield is good. There will be a heavy crop of oranges in some sections. Grain threshing is nearly completed; the yield is light, but the grain is mostly of good quality.

LOS ANGELES SUMMARY.—Conditions favored beans; harvest commenced on early varieties; Limas improved. Walnuts doing well. Peaches nearly gathered. Light prune crop being dried. Citrus fruits in good condition; light crop.

EUREKA SUMMARY.—Rain Saturday and Sunday greatly benefited pastures, gardens and late fruits. Apples much improved; 90% of full crop estimated in principal fruit sections.

Rainfall and Temperature.

The following data for the week ending '5 A. M. Wednesday, September 4, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....	.00	.03	.07	.37	66	48
Red Bluff.....	.00	T	.05	.21	94	60
Sacramento.....	.00	T	.07	.07	90	54
San Francisco.....	T	T	T	.07	78	52
Fresno.....	.00	T	.16	.09	08	54
Independence.....	.00	.33	.77	.09	86	52
San Luis Obispo.....	.00	.18	T	.08	84	46
Los Angeles.....	.00	.08	T	.06	80	48
San Diego.....	.00	T	T	.08	80	80
Yuma.....	.00	.23	.02	.65	104	64



## FRUIT MARKETING.

### Walnuts in France and Hungary.

Special Consular Reports received by the Pacific Commercial Museum of San Francisco, August 22, 1901.

Vice-Consul T. W. Murton of Grenoble, France, sends the following report: Since June 19th last, on which date I had the honor to address the Department on the then condition of the growing crop of walnuts in this district, prospects for output have materially improved, according to the best and most reliable authorities. The cause of this change for the better, it appears, is the fine and seasonable weather enjoyed in these parts for over a month past. The damage occasioned in the spring, to fruit trees in particular, by late and unseasonable cold, hail and storms has been to a certain extent counterbalanced. Walnut trees at the present time are luxuriant in verdure and seemingly bearing extremely well everywhere in the Isere valley. To sum up the situation, it is now expected by competent judges that, should no further harm befall the crop from any cause whatsoever till gathering time, the production this year will be fully equal if not superior to that of last year, at least so far as quantity is concerned.

**VARIETIES.**—I refer more particularly to the kind known as Mayettes, the best and finest of the different sorts grown in these parts, and the quality usually exported to the United States for table purposes. There is a tendency on the part of growers in this department (the Isere) to discontinue the cultivation of the quality known as Chabertes, a small, inferior variety, utilized principally for confectionery purposes. These are exported shelled, the halves or broken pieces being usually put up in cases of twenty-five kilos (fifty-five pounds) each.

Farmers and peasants are constantly cutting down and pulling up these trees to sell the wood, which commands relatively high prices, and the only other sorts grafted or planted in their stead are either Mayettes, Parisiennes or Franquettes, all of a better quality. Thus it is affirmed that in from fifteen to twenty years' time the former or Chaberte quality will have almost, if not entirely, disappeared from these parts.

Of Mayettes, it is variously estimated that the crop this year will yield from 25,000 to 30,000 bags of 100 kilos, or about 25% more than that of last year; but of Chabertes it is said there will be a much smaller quantity than usual, thus equalizing matters and causing the output, as a whole, to average about the same.

**SALES.**—Having heard recently that some purchases of the new crop have been made in the valley for future delivery at the price of \$10.14 per kilo, f. o. b. s. s. Havre, I immediately cabled this information to the Pacific Commercial Museum, San Francisco, as instructed. From what I have been able to learn it appears that the quantity contracted for, so far, only amounted to some 800 or 100 bales at that price, the principal buyer being a Bordeaux firm doing a large business in the United States.

**WHAT IT COSTS TO IMPORT WALNUTS.**—As it may be interesting to American buyers to know what are the approximate charges attending a shipment of walnuts from this district to the United States, I append figures, which I have endeavored to render as accurate as possible, and which include all usual expenses the article has to bear from point of departure to f. o. b. s. s. and, incidentally, c. i. f. New York. These figures are as follows:

Purchase price, delivered at railroad depot.....	Per lb. \$0.0546
Expense of putting on train.....	0.0013
Freight by rail to port of shipment.....	0.0044
Expense of shipping on board steamer at Havre..	0.0066

F. o. b. s. s. price.....	\$0.0659
Freight Havre to New York.....	0.0047
Agent's commission (2%), bank discount, cables, etc.	0.0029

Approximation c. i. f. charge.....\$0.0745

In conclusion, permit me to say that I shall continue to report on the situation of the walnut crop here as circumstances may require.

**WALNUTS IN HUNGARY.**—Consul F. D. Chester, at Budapest, reports that Hungarian merchants make little or nothing of the exports of walnuts. Apart from the bad years, when the import increased about threefold and equaled the export of good years, the import has gradually increased, and the supply, instead of coming from Servia and Roumania only, has started from new districts, viz., the United States, Brazil, British East India and Turkey. The bad years in the last decade were 1896 and 1900, when the import from Roumania more than doubled, while the Servian supply showed a normal increase.

The Hungarian crop this year may be called average. Last year it was very bad, and dealers had to use the remainder of the 1899 crop in the local market at good prices. No injuries of the walnut crop have been noted to date, yet the expectation of a small crop narrows advance sales.

Walnuts are not even graded in the Hungarian

market, nor priced in the bulletin of the Board of Trade. They are sold by exhibition of samples.

The export and import of walnuts from and to the lands of the Hungarian crown has been as follows:

Average export from 1883 to 1896, 2,275,809 pounds; average import for the same time, 815,482 pounds.

The import from the United States was as follows: 1896, 441 pounds; 1897, 661 pounds; 1898, nothing; 1899, 220 pounds; 1900, not as yet published. The import from Brazil was: 1896, 1764 pounds; 1897, 441 pounds; 1898, 1102 pounds; 1899, 661 pounds. The import from British East India began with 1899, 661 pounds.

### The Zante Currant Crop.

A special consular report received from T. W. Jackson at Patras, Greece, is as follows: Existing weather conditions more than substantiate the predictions forwarded the 14th ultimo with regard to the coming currant crop of Greece. There has fallen some rain during the past month, but the wet weather has in no case been followed by excessive heat, so that only from the farthest outlying districts is there reported the presence of "perronosporous," and then from a lack of proper care and to no appreciable extent.

The harvesting of the currant crop will begin on or before August 1 in the Kalamata district, and in the mountainous parts the harvest will open a week earlier. Shipments will commence about August 20, after the Government appraisers have estimated the crop and fixed the rate of retention, which will be this year probably 15%. Conservative estimates place the crop at 130,000 to 150,000 tons; more liberal estimates raise the yield to 160,000 tons. Making due allowance for exaggerations, the crop at this writing gives every promise of being one of the heaviest in many years, and of a very superior quality. Prices will open at about 20 shillings per cwt., but will fall considerably when the shipping begins.

### A Good Raisin Crop Abroad.

Consul B. H. Ridgley at Malaga writes under date of July 15 as follows: I have the honor to confirm my report of the 10th of June on the prospects of the raisin crop in Malaga, and to add that the prospect for an abundant raisin crop are as good, if not better, than as reported in June. The weather has been excellent, there has been little or no damage to the vines from insects, and all other conditions have been flattering for an unusually abundant crop, which now promises to yield from 1,000,000 to 1,250,000 boxes.

## THE STOCK YARD.

### Feeding Calves, Horses and Swine.

In the course of an excellent bulletin just issued by the University of California Experiment Station, Messrs. Jaffa and Anderson give data for the national feeding of the above-named animals, which will be helpful to our readers who desire to regulate the menu of their stock according to scientific principles:

**CALF FEEDING.**—The proper growth and development of the calf is equally as important as the care of the full-grown cow, for good cows cannot be made out of poorly fed calves. Whether the calf be destined for the dairy or for the shambles, the true principle is to keep it in a thrifty growing condition until the end is reached. It is not necessary that the calf be fat—in fact, it is better not to be so. The feed should be such as to produce bone and muscle to form a strong framework with which to produce milk or upon which to lay fat in the time of maturity. The mother's milk, if it be not too rich in fat, furnishes the best food for the purpose; but in our commercial dairying, butter fat can be disposed of at a higher price if made into cheese or butter and a substitute offered which is cheaper.

If the calf is to be raised on skim milk as the principal food, it should receive fresh whole milk for the first ten days or two weeks. Then substitute skim for whole milk, a little at first, and increase gradually until, by the time the calf is three weeks old, it may receive no whole milk whatever. As soon as this substitution begins, add a small handful of wheat middlings to the ration and increase the quantity gradually as the skim milk is increased. Induce the calf to eat dry grain and hay as soon as possible, and give the milk simply as a drink. It will be remembered that skim milk is highly nitrogenous, and to make it a perfect food requires the addition of carbonaceous material. Nothing supplies this any better than cornmeal; but, owing to its high price, rolled barley may be used, mixing barley, wheat, bran and middlings in equal parts and feeding from one to two quarts per day by the time the calf is two months old.

In the case of feeding whey one may begin when the calf is about two weeks old by adding a little to the regular ration of whole milk and increasing the portion, as suggested above with skim milk, until the calf is a month old, when the milk may be taken

away entirely. Unlike skim milk, whey is more largely carbonaceous, owing to the removal of the casein as well as the butter fat. Thus the grain ration should contain more protein than for skim-milk feeding, and for this reason some linseed oilcake meal should be added to the middlings as soon as the whey is fed. Whenever the calf can be induced to eat the grain dry, give a mixture of two parts each of bran and middlings and one part of linseed meal. The calf develops a stronger digestion if it can be early induced to eat hay and its grain dry and drink the milk or whey alone. The chief difficulties in feeding whey arise from permitting it to sour before feeding and depending upon it as the sole food. While it may be possible to raise fairly good calves on skim milk alone, it should never be attempted with whey, because the latter contains only about two-thirds as much food substance as the former. Both should always be fed sweet. The amount of grain necessary depends upon the quality of hay or pasture to which the calf has access. The hay should preferably be alfalfa.

**HORSE FEEDING.**—In making up rations for horses we must remember that the digestive organs of this animal differ materially from those of the cow, the former having but one stomach, while the latter has four, three of which are used, in the main, to prepare the food for the fourth or true stomach, which corresponds to that of the horse. For this reason horses cannot assimilate as much from a bulky or coarse ration as is noted for the ruminants. Consequently, when a horse is being heavily worked, intelligent care must be given to the feeding. For instance, from thirty-five to forty-five pounds of silage can be fed daily to the cow, but less than one-third of that amount should constitute the daily portion for the horse.

When feeding cows it is generally considered best to have the grain or concentrated part of the ration form about one-third of the total dry matter, whereas, in the case of feeding horses, heavily worked, the proportion of grain may exceed one-half the total amount of food. One reason for using so much grain is in order to be sure that we have in the ration a generous amount of protein, so essential to the successful feeding of the horse.

In alfalfa sections so much protein can be supplied in green and cured alfalfa that much less grain is required than is necessary when the roughage consists of cereal hays only. The following balanced rations for animals weighing 1000 pounds illustrate this point:

1.		2.	
Material.	Lbs.	Material.	Lbs.
Alfalfa hay.....	12	Alfalfa hay.....	15
Wheat hay.....	11	Wheat hay.....	9
Crushed barley.....	7	Cracked corn.....	6
Nutritive ratio.....	1:5.7	Nutritive ratio.....	1:5.6

3.		4.	
Material.	Lbs.	Material.	Lbs.
Alfalfa hay.....	9	Alfalfa hay.....	10
Barley hay.....	12	Barley hay.....	12
Crushed barley.....	7	Cracked corn.....	7
Nutritive ratio.....	1:5.7	Nutritive ratio.....	1:5.9

For a horse at light work 12½ pounds of alfalfa hay with the same amount of cut straw forms a balanced ration. It may be mentioned that it is more economical, and also better for the digestion, to cut all the roughage.

If barley hay, rolled barley and cottonseed meal were the feeds in question, the ration would consist of fifteen pounds barley hay, twelve pounds crushed barley and one pound cottonseed oilcake meal. This ration would be much more expensive than either of the others quoted above.

**COLT FEEDING.**—No general rules can be laid down for the feeding of colts; but, as in the case of the calf, it is very necessary that proper care should be exercised in the selection of foods. Cow's milk may be substituted, if necessary, for that of the mare. The colt should be taught to eat grains, any of which may be fed to advantage; the choice would depend on ruling prices. At times, when the colts are teething, it will be found more profitable to warm and moisten the grain ration. Hay of first quality, preferably alfalfa, should be fed in conjunction with the grain, so as to properly develop the digestive system.

**SWINE FEEDING.**—The same principles hold true in pig feeding as with other animals. Inasmuch as the largest demand is now for small pork, the aim of the feeder should be to produce as much growth as possible in a short time. The rations, therefore, should be rather nitrogenous, having a high percentage of protein when the pigs are young, or as soon as they begin to eat, and increasing the carbonaceous portion as they grow older. We give two rations—one for alfalfa regions and the other for sections where alfalfa is not grown. Both rations are calculated for fifty pigs weighing about fifty pounds each, and can be changed in proportion as the pigs are lighter or heavier. The age of the pigs is supposed to be from two to three months:

Material.	Lbs.	Material.	Lbs.
Middlings.....	30	Linseed meal.....	10
Ground barley.....	50	Cornmeal.....	35
Alfalfa hay.....	20	Middlings.....	55
Skim milk.....	200	Skim milk.....	200

The alfalfa hay may be fed in the long state, but the most economical way is to cut it in a cutting ma-



chine and mix with the grain and skim milk, allowing the mixture to soak twelve hours before feeding. If feeding green alfalfa, calculate  $4\frac{1}{2}$  pounds of green for one pound of hay.

Alfalfa is one of the cheapest foods known for growing pigs; and, so far as experiments show, it furnishes the only pasturage upon which pigs may be kept without any other food. If expected to make much growth, the pasture should be supplemented with some extra food.

## THE POULTRY YARD.

### Goose Growing in California.

E. J. Cole, who is broadly credited to California without specific residence, gives the Orange Judd Farmer a few notes on handling geese which may be useful to others.

**FEEDING.**—When the young geese are hatched do not give them feed or water for the first thirty-six hours, or, if water, only a few drops from the finger tips. Their first feed should be bread crumbs, moistened with boiled sweet milk and mashed up fine with a hard-boiled egg. After that for the first week feed boiled oatmeal, stale bread, potatoes, corn bread and bran moistened with milk, or scalded meal and shorts. Then add cracked corn and wheat. When three days old feed all the green food that they will eat, young sprouting rye, clover, purslane, onion tops, etc. Have plenty of water for drinking purposes near them, but in a vessel which they cannot get into, as they should be kept as dry as possible.

They should be fed often, but not more than they will eat at one feeding. They should be kept clean, as they eat so greedily that they will devour droppings or anything, and filth is fatal to them. They need care for the first two or three weeks, after which they will look out for themselves.

**PENNING.**—A good pen in which they can be kept during this time is made of four boards 1 to 2 feet wide and 10 to 15 feet long, nailed together at the corners. This can be moved about from place to place over patches of young rye or tender grass, for a few young goslings will soon eat a place very clean of green food. They should always be housed at night and have shade accessible during the day, as intense heat or dampness is fatal to them. When young, they should not be allowed to run on the grass until the dew is off.

**DRESSING.**—Kill by severing the artery in the neck with a small, sharp knife, or by giving a sharp blow on the head. Let them bleed hanging up for about five minutes. Then plunge into boiling water for about twelve seconds, wrap in a cloth and let steam for five minutes. Pick immediately, beginning at the head, and the down will come off very easily. Care should be exercised in plucking young goslings, as the skin is often very tender and tears readily. Green goslings, as young goslings are called, should not be drawn for market. After picking, place in ice cold water for an hour to plump them.

**MARKETING.**—In eight weeks geese can be made to weigh eight pounds and at the end of three months from fifteen to eighteen pounds, depending on the breed. Some large varieties will weigh twenty pounds the first season. When they are from eight to ten weeks old they can be sold to those who make a business of fattening them for market, or may be fattened at home, where they will bring much more. The fatter they are the better price they will bring, especially in Jewish quarters, as the Jews make extensive use of goose fat. The best market for them is in June or early July. If not sold then, keep them and fatten for Christmas.

Pen them three or four weeks before selling them, first putting them into water to clean their feathers, and then into a pen with clean straw. Feed scalded meal in a crumbly state with about one-fifth part meat scraps, or give cracked corn with water, or a little corn and always plenty of grass. They should be given all the food they will eat. Keep them quiet, for if excited or disturbed they will not fatten. Young geese are ready for market when the tips of the wings reach the tail.

### Teaching Chicks to Roost.

From the time the chicks are able to fly 8 inches high, says W. C. McFarlane in California Fancier, I have roosts for them in the brooder runs, so that they use them more or less during the day. When they are old enough to do without the brooder heat, I place boxes across the corners of the run so as to cut off the square corner, and thus avoid crowding, as it compels them to spread out more. Some take to the roosts and remain there all night; others part of the night at first, but in a few nights more all are roosting.

When they are moved from the brooder house to the regular roosting houses then most of them take to the corners again, as the roosts are 2 feet from the ground. To avoid crowding in the corners I have corners blocked off. I also have a lath ladder 2 feet wide flat along each side of the house, 3 inches from

the ground. The object of the ladder—or lath floor, I presume, would be a better name—is that it compels the chickens to roost; for, if they try to crowd together, their feet, and, in fact, the whole chick, will fall through between the laths. It is but 3 inches to the ground—just high enough to prevent the chicks crowding under it, and, at the same time, giving room for those that fall through to get out at the side.

To make the ladder I take two pieces of 1x4 10 feet long—as that is the length of my houses—and nail on pieces of heavy laths or pickets 2 feet long, putting them 3 inches apart in the clear. I use one ladder on each side of the house, and shut the chicks in the house for the first two days. In this way they learn to use the regular roost during the day, and in a short time they take to it at night, and your trouble in that line is at an end.

During the last eight years my average output of chickens has run over 3000 for the season. It stood me in hand to devise a method of teaching them to roost, and the simple plan outlined above was all that could be desired.

## TRACK AND FARM.

### How the Trotting Record Was Lowered to 2:02 1-4.

Harness racing was at a very low ebb this spring in New York, says the Breeders' Gazette, when a few rich men got together and, looking over the schedule of dates allotted by the State Racing Commission to the metropolitan jockey clubs, determined to lease the old and famous Brighton Beach track for the week beginning Monday, August 12, and ending August 17. The lease of the track having been acquired, nothing was left undone to make the meeting a success. The inhabitants of the city of New York are not satisfied with halfway sport of any sort. They want the cream or nothing. The first move made was the offering of a \$12,000 purse for a special race between the team champion trotter The Abbot, 2:03 $\frac{1}{4}$ , and Cresceus, record at that time 2:04, champion stallion trotter and by many considered quite able to defeat The Abbot whenever they should meet. The contract read that the winner should take \$7000, the loser \$5000.

It was a condition of the special that these two trotting celebrities should not trot in any two-handed race or special prior to August 15. They might go in races open to all or against time to their hearts' content, but not in races in which only two horses should take part. This insured their first meeting at Brighton Beach. As time went on interest grew again in their meeting. Opinions were about evenly divided as to superiority for a long time, and then The Abbot came down with an attack of distemper. Right after that Cresceus went a mile in 2:08 $\frac{1}{4}$  in his work, and as the first half was done in extraordinarily fast time the backers of The Abbot found it was time to hedge. For some weeks it was thought that Geers could not possibly get The Abbot in shape to get into the race in anything like condition. The attack of distemper was only a moderate one, but while the gelding was standing idle in his stall, being nursed, Cresceus captured the world's race record, and that for two consecutive heats, trotting, doing that trick at Detroit, when he went two miles in the free-for-all trot in 2:06 $\frac{1}{4}$ , 2:05. With only about a month for The Abbot to get into shape, his chances seemed very slim, as, indeed, they were. At Cleveland Cresceus continued his victorious career, cutting the world's and The Abbot's records of 2:03 $\frac{1}{4}$  down to 2:02 $\frac{1}{4}$ , and at Columbus he chipped one more half second from that mark, when he circled that lightning-fast course in 2:02 $\frac{1}{4}$ . Fine by degrees and beautifully less The Abbot's chance of defeating the stallion grew day by day. When asked the question if he would be able to race with Cresceus, The Abbot in the presence of the Brighton Beach managers responded by a mile in 2:13 $\frac{1}{4}$ , which showed that his speed had not suffered any material damage, whatever his condition as to a race might be. Plenty of excellent judges maintained that Geers was mad to think of pitting such a gelding so soon after recovery from distemper against an opponent like Cresceus, but at last the day appointed rolled around and the bugle called the trotters to the post to struggle for the racing championship of the harness turf.

The story of the race takes but little time to tell. The first heat was won by Cresceus in 2:03 $\frac{1}{4}$ , The Abbot beaten but half a length and officially timed in 2:03 $\frac{1}{4}$ , showing, as his mark is 2:03 $\frac{1}{4}$ , that he had all his old time speed with him. Still, he was beaten. In the second heat The Abbot broke just after the word was given, and it was then all over, Cresceus finishing in 2:06 $\frac{1}{4}$ , with The Abbot outside the distance flag a few yards. The third heat was won by Cresceus, going alone, in 2:05. Many were the records that fell in this memorable struggle. First of all, one and three-quarter second was clipped from the previous world's best race record trotting, which was 2:05, set by Cresceus himself at Detroit last July. Then, when he finished the second heat in 2:06 $\frac{1}{4}$ , Cresceus broke the record for the two fastest consecutive heats, and when he came home in 2:05

the third time around he similarly smashed all to pieces the world's best marks for three heats on the trot. Verily, it was a splendid performance and stamps Cresceus as the greatest trotting stallion the world has ever known.

## THE APIARY.

### Making Swarms to Order.

Dr. E. Gallup of Orange county tells the American Bee Journal how he makes swarms. A Langstroth-Simplicity hive makes a very convenient box with the entrance closed, and a board nailed on the bottom, for a clustering box. You can set up the box open side outward, and shake the bees from the combs directly into the box, instead of waiting for them to run in, as in hiving. They will begin to cluster at the top end of the box at once. If you have two or more swarms come out at one time and cluster together, or you have after or second swarms with more queens than one, and you wish to separate them, shake them into the clustering box and let them stay for half or three-quarters of an hour, and the bees will ball the surplus queens, and roll down to the lower edge of the box, and you can cage them and then measure out the bees with a tin dipper, pour them down in front of the hives, and let them run in, the same as hiving a natural swarm.

**HOW THE BEES ACT.**—I once caged eight virgin queens from one after-swarm, and saved them all. They are naturally reared, and usually good ones. In that case the bees hunt out the surplus queens for you. Sometimes they ball every queen, but not usually. It is an easy matter to tell whether every division you make has a queen, by the actions of the bees. Bees in a clustering box, or hived on empty frames without a queen, will very soon manifest uneasiness, and begin to run about, etc. But if they have a queen they remain quiet. They will accept any strange queen—even virgins will be accepted, or a queen cell, or a frame of brood containing eggs and unsealed larvae.

Four years ago I had an observation hive in the woodhouse, and the bees were passing out and in through a knothole. One of the boys wanted to see bees flying out and in through that knothole, so I went to work. I set up my clustering box in the shade, went to a populous colony, carefully took out a frame of brood and adhering bees, shook the bees into the clustering box, and as the bees were gathering nectar rapidly there was enough shaken on the bees and in the box to gorge themselves completely. I placed the comb back in the hive and closed it; I had not disturbed the old colony, either with smoke or drumming, so they went right along with their labor as usual. I went to four different colonies and took the bees from one comb, each in the same manner. I had my smoker on hand in case I needed it, but I did not have to use it. I was careful not to get the queen from any hive. I took a frame of brood from two different hives, inserting an empty frame in their places. It was in the middle of the day, so the old bees were nearly all in the field.

I placed the two combs with the adhering bees in a hive, and hived the cluster, and placed them in the woodhouse, and now the boys have the satisfaction of seeing how the loaded bees throw themselves into that knothole instead of alighting on the outside and crawling in, as one would naturally suppose they would. The two boys take a great interest in the bees, so I am giving them lessons by actual demonstration.

**PRACTICAL SUGGESTIONS.**—One can make nuclei for queen fertilizing or introducing at any time, in the above manner. If there is no unsealed nectar to shake out with the bees, sprinkle them with diluted honey or melted sugar of the right consistency, so they will fill themselves. Be careful not to excite robbers at any time when the bees are not gathering freely. If there is danger, go through the operation just at night. I learned all those kinks of making swarms, nuclei, introducing queens, etc., in the old box-hive times, from my old friend Wellhausen, years ago. It takes all the fight out of a bee when gorged with sweet, and shaking them into a clustering box and letting them stand awhile. They can be hived and placed where we want them. They are to all intents like a natural swarm. One can take a pint of bees, more or less, from a populous colony, and, for that matter, from a dozen colonies, mix them all up in a clustering box, and make a good swarm without perceptibly weakening the old colonies, and you get bees of all ages, the same as in natural swarming; and I have always thought that it makes them work with an extra vim.

I have occasionally received a queen from some friend, and have no colony that I wanted to introduce her to. So I would make a swarm for her from several different colonies. As soon as the bees manifest their queenlessness, hive them and let the queen run in with them, and the job is done.

In introducing a virgin, hive them on empty frames, and let them stand for a few hours, say over night, before giving them a frame of brood and



honey. For I always like to "set them up in house-keeping," as sometimes they are not satisfied and will start queen cells if given eggs and larvae at once. When we have a swarm, sometimes the weather turns bad for a few days, and then they need honey in the hive, or ought to be fed.

I have moved my bees at times from one position to another by shaking and brushing them from their combs into a clustering box, moved the hive to the new stand, and then after letting them stand awhile run them into the hive, and they are moved.

## ENTOMOLOGICAL.

### Fumigation for Woolly Aphis.

TO THE EDITOR:—Your letter and the University pamphlet on fumigation duly received. We tried the hydrocyanic acid gas for woolly aphis on apple trees, as directed in the pamphlet for citrus fruit trees. It did not seem to kill all the aphides, as we were using a common canvas tent, unpainted, and there was probably some loss of gas. We then tried a larger dose on several trees—three ounces of cyanide to four and one-half of acid to a tree 4 by 8 feet. When the tent is on the trees, close up, it runs from 4 feet wide at the bottom to a sharp point at 8 feet high. The experiments with the larger doses were made on the 19th and 24th of August, and the aphides are now drying up and falling off, and I cannot find a live one on the trees. We used the gas at night and in the heat of the day, and did not see any difference in effect. It has not as yet injured the tenderest growth, and I think it is going to prove the thing. It is rather expensive, as we bought our materials on a small scale, but one does not have to go over the whole orchard, as not all trees are affected. The druggist tells me the acid weighs double what water does. We used it by weight, not measured ounces. I hope this will prove of as great a benefit to the apple growers as it has to the orange growers.

Agnews, Santa Clara county. APPLE GROWER.

Your statement of experience with hydrocyanic acid gas for the woolly aphis is very interesting. It will not, however, be a perfectly satisfactory test of the matter until you treat your tent so that there is no escape of the gas. This will not only be in the interest of economy, but it will also demonstrate how great strength of the gas the apple will endure, both by day and night treatment, for the possible escape of the gas would render it not only less effective in killing the insect, but also less injurious to the foliage. It would be very interesting if you would treat the canvas according to the methods indicated in the bulletin on fumigation, and then make a further test of the efficiency of the gas and its effect upon the foliage. For a preliminary experiment your proceeding is very interesting.

## METEOROLOGICAL.

### A Sketch of the Santa Barbara Climate.

TO THE EDITOR:—The Santa Barbara people have appreciated very much the pleasant article on "Picturesque Santa Barbara," appearing in the PACIFIC RURAL PRESS of August 17th. The illustrations, too, are well chosen. We have had a most delightful summer here and the visitors have much outnumbered those of any former season. Everybody seems perfectly satisfied with the delightful summer climate of Santa Barbara. Encouraged by your allusions to our region I have taken the liberty to write an article for your valuable paper discussing our local climate somewhat in detail, which I trust may be interesting to your wide circle of readers in various parts of the world.

A CONTRAST.—As Barbarenos, during the month of July, read the news dispatches detailing the frightful ravages made by the intense heat in the great Eastern cities, it was interesting to note the expression on every face, indicative at once of physical comfort and deep gratitude that their lines had fallen in such pleasant places.

And when the record for the month was made up and it was found that for one day only did the mercury register above 80°, and then but 86°, the wide contrast with the continued temperatures of 100° or more in the land beyond the Rockies, was the more strikingly in evidence.

What was more a source of satisfaction to those Barbarenos, however, was the fact that they sallied forth to their daily vocations after a night spent in refreshing slumber with the thermometer at an average of 56°, never above 60°, while he of the sun-baked and drouth-stricken East, dragged himself wearily forth from a chamber where he had spent the night rolling and tossing in the agony of sleepless exhaustion, finding the very walls charged with caloric as he vainly tried to cool a hand or foot by contact therewith.

While the zero temperatures of a northern winter

are decidedly uncomfortable to one exposed thereto, yet respite may be obtained by artificial heat and life be not altogether a burden to the dweller in districts where the mercury freezes up. From the fiery ordeal through which our Eastern friends have just passed, however, there was no escape at hand, and the millionaire and the pauper dropped together under the potent fervors of the king of day.

SUMMER AND WINTER.—Now the so-called "climate dodgers" who go south to escape zero weather and north to escape the heat, are always on the look out for some favored spot that is void of extremes, where the weather is warm in winter and cool in summer, and where all the climatic advantages of Cape May in summer and Pasadena in winter may be enjoyed on one spot. Many of these people have found such a unique combination in this most delightful of all the Pacific coast cities, Santa Barbara. In proof thereof we herewith submit the weather record for the months of December, 1900, and July, 1901, as observed for the Weather Bureau at this point:

Date.	December, 1900.			July, 1901.		
	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.
1.....	80	54	67.0	70	59	64.5
2.....	77	55	66.0	68	58	63.0
3.....	80	49	64.5	71	52	61.5
4.....	81	52	66.5	71	54	62.5
5.....	83	54	68.5	76	55	65.5
6.....	84	57	70.5	73	57	65.0
7.....	83	56	69.5	76	55	65.5
8.....	80	55	67.5	76	58	67.0
9.....	69	47	58.0	77	53	65.0
10.....	65	46	55.5	76	53	64.5
11.....	71	46	58.5	78	55	66.5
12.....	67	45	56.0	76	56	66.0
13.....	69	45	57.0	80	54	67.0
14.....	64	48	56.0	78	54	66.0
15.....	64	46	55.0	74	55	64.5
16.....	69	44	56.5	80	55	67.5
17.....	72	47	59.5	78	57	67.5
18.....	70	48	59.0	75	56	65.5
19.....	75	51	63.5	75	56	65.5
20.....	69	46	57.5	74	56	65.0
21.....	74	52	63.0	75	56	65.5
22.....	68	50	59.0	76	55	65.5
23.....	70	46	58.0	77	58	67.5
24.....	72	47	59.5	76	55	65.5
25.....	71	47	59.0	70	56	63.0
26.....	69	50	59.5	72	56	64.0
27.....	69	45	57.0	71	57	64.0
28.....	63	49	56.0	67	56	62.0
29.....	63	40	51.5	68	56	62.0
30.....	63	39	51.0	86	58	72.0
31.....	57	38	47.5	80	60	70.0
Means....	70.7	48.2	59.5	74.9	55.8	64.2

WHICH IS SUMMER AND WHICH WINTER?—As shown above, the warmest day of December, 1900, was 84° and the warmest day of July but 86°, a scarcely noticeable difference of but 2°. The lowest temperature on the warmest day of December was 57° and the minimum temperature of the warmest day of July was 58°, a difference of but 1°. And the difference in the mean temperature of the two months was but 4.7°.

From the foregoing it is very evident that one needs but to come to Santa Barbara to enjoy the very happy paradox of warm winters and cool summers. And not only is the temperature of the atmosphere equable but agreeable as well for during the larger portion of the year there is no sensation of either heat or cold, but only the feeling that the air has been tempered to one's personal taste.

The equability of Santa Barbara's climate is not produced by strong winds that temper the heat of the sun nor by clouds that screen its rays. In proof of this is the fact that the average wind movement during the month of December, 1900, was 2.4 miles per hour, and there was not one cloudy day during the entire month, while the wind movement for July, 1901, was but 3.68 miles per hour, and there was only one cloudy day.

WHY IS THIS?—Honest seekers for information may ask why should Santa Barbara be particularly favored in the matter of climatic conditions above all other places in the United States, and to one who has made no study of its physical geography, prevailing winds and ocean currents, the city's claims may seem presumptuous. A careful investigation, however, will not only remove all skepticism from the mind of the student, but fill him with surprise at the modesty of the city's pretensions.

To give such a student some idea of Santa Barbara's situation, perhaps an illustration will be effective: You have walked down a street in your native town on a raw spring or autumn day when a chilling wind was searching for the weak points in your armor, and passing round a corner at right angles to the wind have found in the sunny and sheltered lee a most comfortable atmosphere. Such is Santa Barbara, "just around the corner," out of the wind, basking in the sun of a winterless year.

The northwest trade winds that blow so strongly on the coast of California are baffled by the eastward trend of the shore at Point Concepcion and go storming down past the Santa Barbara islands,

which are more or less windy in proportion as they stretch to the eastward, parallel with the Santa Barbara shore. It is, therefore, not the northwest trade wind that constitutes Santa Barbara's delicious sea breeze, but rather the tempered wind from the warm channel that washes the southern shore. And it is this same body of warm water that dispels the chills of winter as well. And as the temperature of the water of the channel varies but about 8° from winter to summer, so does the average temperature of the air vary about the same number of degrees.

As intimated above, one of the most inviting features of Santa Barbara's summer climate is the absence of disagreeable winds. Now most persons associate a cool atmosphere in summer with a strong wind, a la San Francisco. But Santa Barbara is not cooled in that way. While the average wind movement for the entire year is but 4 miles per hour, during the summer months it is still less, the average for May, June, July, August, September and October being but 3.6 miles per hour.

For the benefit of those who have not made themselves familiar with the figures of wind movements we would state that the annual movement for Philadelphia is 9.7 miles per hour, and that of Washington, D. C., 6.3 miles per hour.

In the summer night there is rarely any wind in Santa Barbara and nothing could be more delightful than the gentle breeze that from 9 A. M. until 5 P. M. makes, in conjunction with the summer sun, a temperature, the like of which is unknown on this continent.

AN EXPERIENCED VISITOR.—An elderly gentleman who has retired from active business life and who for the last twenty years has been sampling the climatic and meteorological conditions of every prominent resort in the United States, is now spending his first summer in Santa Barbara. In conversation a few days ago, after enumerating the different places in which he had sojourned, he said: "But the seven weeks we have spent in Santa Barbara are the most delightful I have ever experienced. I have made a study of climatic conditions in very place I have visited and have found nothing that compares with Santa Barbara. I feel that I need seek no further for perfection." Like commendation may be heard from every one who spends a summer in Santa Barbara. New comers, experiencing for the first time the delights of its atmosphere, are most enthusiastic in their demonstrations of approval and the wonder is constantly expressed by them, "Why doesn't everybody come to Santa Barbara in the summer?" Now everybody means a good many and we doubt the capacity of this charming valley to hold the entire population of the United States, but there is room for thousands here, and now that direct and frequent rail communication exists with all points north, south and east, those people who are in a position to make a summer change will find this locality a most enjoyable one in every particular. The scenery alone would make the fortune of many another resort, for no more beautiful environment exists than that which holds this gem in appropriate setting.

LOCAL SCENERY.—Northward are the rugged peaks and bold spurs of the Santa Ynez, amid whose canyons and defiles and along whose crest wind horseback trails that at every step afford revelations of rare beauty; then the foothill region in a garb of green and old gold, with cosy homes nestling in quiet nooks; between the foothills and the sea a fertile valley, green with laden orchard and rustling corn; south the placid channel, kissed by the sun into a million smiles, with here and there the snowy sail of some dreamy voyagers, for on this quiet bay is the finest yachting ground of the world; then across the sunlit waters to where the island mountains raise blue summits against an opal sky.

From a hundred points in and around this fair city all this land and seascape may be seen. Its exploration in detail will take all one's spare time through the delicious summer days.

RECREATIONS.—A most attractive feature of Santa Barbara, both summer and winter, is the rare sea bathing facilities offered by a perfectly safe beach, water at an agreeable temperature and the most elegant bathing establishment on the coast. Here is no undertow, no sharks, no raw winds, no sting rays. Children of two years and upwards play in the gentle surf with impunity and accidents are unknown. To the tired city worker a sojourn of even one week in Santa Barbara means renewed vigor and strength for months to come, and when that stay may be prolonged into a few months one feels like a new being and good for a hundred years.

The days are so delightful, with the early plunge in the surf, the loitering on the beach, resting on the sand, drinking in the ozone of Elysian airs, home to lunch and then off for a long drive or horseback ride through scenes of wondrous beauty, back in the evening coolness to a night of refreshing slumber, these happy experiences make old men young, nervous women strong, feeble children sturdy.

Come to Santa Barbara and give it a trial. You may now think our picture overdrawn, but ere you depart you will say as did a skeptical queen in long ago days, "The half has not been told." C. M. G.

Santa Barbara, Cal., Aug. 31.



## Agricultural Review.

### ALAMEDA.

**THE PRUNE OUTLOOK.**—Niles Herald: The first shipment of the new crop of prunes is being followed this week with a daily shipment of a carload by the California Dried Fruit Co., E. K. Cassab manager. They are filling an order for 100 carloads, and C. C. Carson of St. Louis, Mo., is here inspecting and paying for the fruit as fast as it is filled. The local crop last year ran to very small sizes, and on the 3-cent basis prices realized hardly paid for gathering, let alone the drying and handling by the grower. This year the crop runs to larger sizes with a better price in sight. Nearly the total crop has been sold green and prices have been about \$22.50 per ton, while in Santa Clara as high as \$35 has been paid. The difference is in the size of the fruit. Good judges say the local crop will not run much larger than fifty to sixty to the pound. Dried prunes are being held on a basis of 4 to 5 cents for the four sizes.

### BUTTE.

**MAGNIFICENT PEACHES.**—Oroville Register: E. C. Cummings of Rio Bonito has some of the finest peaches we have ever seen. A box of selected fruit weighed all of a pound apiece and were over a foot in circumference. The peaches are of the Sellar Cling variety, and previous to this year the trees have not been irrigated. This year Mr. Cummings installed a steam pump for irrigating purposes and these peaches show very forcibly what can be done by judicious irrigating. Last week Mr. Cummings made a shipment of a few boxes of peaches to the city, the peaches averaging about fifteen ounces in weight each.

**SHIPPING PEARS TO MEXICO.**—Oroville Register: Bartlett pears are being shipped from Paradise in Butte county to the City of Mexico. The distance is about 2600 miles, as it is 1200 miles from San Francisco to El Paso and 1200 from El Paso to Mexico. A fifty-pound box costs, laid down in the City of Mexico, \$5, so that pear eating is a luxury in that place.

### LOS ANGELES.

**FRUIT NOTES.**—Pomona Times: The Pomona Deciduous Fruit Growers' Association is curing prunes now. Secretary Ford says no estimate of the quantity in the Association has been made, but from 300 to 400 tons are expected.—Some Valencia oranges sold in New York last week at from \$2.45 to \$4.75, or an average of \$3.70. Lemons were arriving in poor condition and selling at from 75c to \$2.55.

### MONTEREY.

**RUST IN GRAIN KILLS HORSES.**—King City Rustler: Rust in grain fed to horses on the Miller & Lux Peach Tree ranch laid out four with lung fever and two of them died. The same day a fine animal belonging to Joe Copley of Priest valley died from the same cause.

### NAPA.

**RIPENING GRAPES.**—Napa Register: Another year's vintage is at hand. What will the harvest be? Not more than half a crop, according to the estimates of vineyardists hereabouts. E. W. Churchill of Tokalon says the frosts came at a bad time for the tender plants. A vineyardist from Oakville says wine makers are offering \$25 per ton for Napa-grown grapes.

### ORANGE.

**RAIN AND COLD WEATHER KILL THE RED SPIDER.**—Los Angeles Times: It is reported that a number of walnut growers of Orange county are complaining of the destructive work of a small, red spider, which has attacked the walnut trees in the lower walnut groves of the county, causing the leaves to turn yellow and injuring the trees in other ways. W. M. McFadden, a walnut grower of many years' experience, states that the little red spider is not as destructive as some growers think it is. He says he has not noticed it on any of the walnut groves along the foothill belt in the Fullerton and Placentia districts, and that the pest will entirely disappear when the first rains come, as it cannot stand cold weather.

### SAN BERNARDINO.

**THE SUGAR BEET HARVEST.**—Chino Champion: The sugar content of the beets now being worked is an average of about 15%. Those from the Chino fields are noted to be higher, especially in purity, than those coming from outside points. About 200 tons per day are now being harvested from the Chino fields. The beets at Indio this year gave encouraging returns, and the probabilities are that a considerable acreage will be grown there next year for the Chino factory. The beets grown there this year averaged 19% sugar in June. Later the weather became so hot that they deteriorated. It is determined that the planting in that

section must begin early—say in December, and the harvest must commence about June 1.

### SAN JOAQUIN.

**PRICES OF WINE GRAPES.**—Lodi Sentinel: Frank West of the well-known winery firm says the commission men can afford to pay higher prices for grapes than the wineries, because the former sell to small consumers. Here in this county the commission merchants are offering from \$22 to \$25 per ton.

**HEAVY SHIPMENTS OF POTATOES.**—A Stockton dispatch states that a few days ago a special train of about forty carloads of potatoes was hauled out of that city for the Middle and Southern States, some of the shipment going as far east as Indiana. The potatoes are raised on the islands west of that city and towed there on barges, from which they are transferred to cars. Local dealers are paying from \$1.50 to \$1.60 per hundred for tubers on the river bank. The shipment, which was the largest single consignment of potatoes ever sent out of the State, cost over \$15,000.

### SANTA BARBARA.

**THE MUSTARD CROP.**—Los Angeles Times: Of the 50,000 sacks, the estimated output of the Lompoc mustard crop, only a small quantity has been sold. The Southern Pacific Milling Co. has about 6000 sacks in its warehouse, and the Lompoc Produce Co. has bought a few thousand sacks, but the bulk of the crop is still with the producers. Harvesting is by no means done, but the selling is slower than usual. Farmers are holding their crops for 3 cents; and though the organized effort among them to hold the crop proved a failure, yet a concerted effort without prearrangement seems to keep the mustard out of the market.

### SANTA CLARA.

**BIG SALES OF BARLEY.**—Gilroy Gazette: James Princevalle is again to the front as a big buyer of barley. Last week he purchased 16,000 sacks of the cereal and this week he has closed several more deals. Most of the barley is shipped to Oakland, where it is transferred to the deep-water ships.

**SECOND CROP OF APRICOTS.**—San Jose Mercury: Charles Flickinger of Lawrence is showing with pride a second crop of apricots in one of his trees. On a small branch, about 6 inches long, are eight large-sized apricots, which will be ripe in about a week.

### SANTA CRUZ.

**APPLE CROP OF PAJARO VALLEY.**—Watsonville Pajaronian: It is estimated that shooks for at least 1,200,000 boxes have been ordered for the apple crop of Pajaro valley. The shooks come from the northern part of California, in the Siskiyou mountains, and some from southern Oregon. The railroad company gets the freight on hauling over 150 cars of box shooks from the northern mills to this valley before the boxes reach the packing houses, and the shooks for this year's apple crop will cost about \$100,000. The apple business in Pajaro valley is on a wholesale basis in all its items of cost. The paper used for lining boxes and wrapping apples will reach a total cost for the season of perhaps \$5000.

### SOLANO.

**BIG PRICES FOR GRAPES.**—Solano Republican: A report from an Eastern fruit commission house shows the sale of fifteen crates of fancy Tokay grapes belonging to Morgenstern & Milzner of Vacaville at the excellent price of \$3.15 on August 16.

**WAREHOUSES ARE FULL.**—Solano Republican: Owing to the inability of the schooners to discharge their cargoes at Port Costa, not many have loaded grain here this month, and the warehouses have about reached the limit of their capacity. Unless boats take some of the grain soon, it will have to be piled outside until room can be made for it in the buildings. It is coming in at a lively rate.

### SONOMA.

**WINERIES START CRUSHING.**—Cloverdale Reveille: The grapes are ripening fast and already many are ready for crushing. Several of the wineries commenced operations Monday; however, the season will not be generally opened until about the 15th. The grapes are fast being contracted for and very few lots are yet unsold.

**CANNERY NOW A HAY BARN.**—Petaluma Courier: The immense cannery buildings which for years have stood idle have at last been put to use as a warehouse. After many endeavors, George P. McNear has succeeded in renting the buildings from the owners and will use them for the storage of hay. Men are engaged in putting 600 bales of hay per day in the building. When full the building will contain over 2000 tons. The old Congregational Church is also being filled

with hay, as is almost all the available warehouse space in this city.

### SUTTER.

**VACCINATING HOGS.**—Sutter Independent: The farmers in No. 70 district and on the Sacramento river are taking the proper precautions against loss of their hogs by cholera and are having them vaccinated. Dr. Williams of Marysville has been in that vicinity for several days injecting into the swine the cholera antidote.

### TEHAMA.

**NOT MUCH DRIED FRUIT.**—Redding Free Press: A fruit buyer, who is well posted, says that from the territory extending from Marysville to Anderson there is usually shipped about 500 carloads of dried peaches each year if the fruit season is a fair one. This year, however, there will be only about 120 carloads to ship, which shows the general effects of the late frosts in April. In former seasons thirty carloads of dried peaches have been shipped from Red Bluff, while this season there will not be over five. As to the matter of prunes, he said they were not in it—there are not enough of them to consider.

**VACCINATING CATTLE.**—Red Bluff People's Cause: J. S. Crain of Biggs will go to Butte creek, where he has a number of cattle on pasture. In company with other cattle owners, he will vaccinate the young stock on the ranges in that vicinity against the blackleg. Stockmen generally are using every precaution to prevent a spread of the disease.

**NEW BREED OF DAIRY CATTLE.**—Red Bluff People's Cause: One of the most interesting features of the State Fair this year will be an exhibit of a small herd of Brown Swiss cattle. This is the first time cattle of this breed have been exhibited in California. They are not generally bred in America, and have never been bred in California. They are, however, the common dairy stock in Switzerland, which country has made great development in dairying, and they frequently attain a high degree of excellence. As they are exclusively a mountain breed, they should do well in many parts of this State where cattle are ranged for seven months in the year on mountain brush and ground growths, and for five months are fed on coarse hay with very little or no grain for variety and balance.

### TULARE.

**PRUNES IN DEMAND AND QUALITY HOLDS WELL.**—Visalia Delta: The Fleming & Jacobs packing house is busily engaged in packing, labeling and loading prunes. Several rush orders have been received and two to three cars a day are being sent out. Prunes are being sent to Kansas, Massachusetts, New York, Alabama, Michigan, Illinois and other States. It has been demonstrated that prunes will keep to perfection in this climate. Fears were expressed that a large quantity held over would spoil, but the fruit is really better than when it was first placed in the packing house, for it is more uniform in color and quality. This knowledge will be valuable to growers, for they will no longer fear to keep their prunes when the market is down.

**THE TROUBLESOME COYOTE.**—Tulare Register: The people of Tule river in the Woodville district are nearly exasperated by the coyote nuisance, and they are talking about making up a bounty system among themselves to encourage coyotes being killed. They prey upon poultry, pigs and sheep and kill enough stuff to pay most any sort of a bounty, but it is not easy to kill them. People do not dare to hunt them with long-range rifles through fear of killing stock or people in adjacent fields, and then they get into a sunflower patch almost as quick as seen and then disappear from view. The nights are made resonant with their music, and the Thanksgiving and Christmas dinners problematical. The people are beginning to feel that something must be done or the coyote will have the country to the exclusion of their betters.

### VENTURA.

**GRAIN AND BEANS.**—Oxnard Courier: Grain hauling to the various warehouses in the outlying districts has not yet reached its height, but hundreds of bags are leaving the fields daily. The different bean threshers of the county expect a good run this year and are making preparations already. The separators have to be renovated, new cylinders and shafts put in, and general preparations made for the harvest season, which will last several months. Farmers will be impatient to get their crop off the ground, as it is a late one, and early rains would mean considerable damage.

**LATE THRESHING OF BARLEY.**—Big Hay Crop.—Hueneme Herald: Owing to the tough character of the straw, barley threshing will extend later this year, probably up to bean threshing time. The

fact, also, that so few machines went out is another cause for the length of the season. Estimates of the grain crop are placed at about 350,000 sacks. A large hay crop will be made and plans are being discussed for building a large hay warehouse in the valley. General reports from beans continue favorable as to growth, but pods are not setting on the vines very thickly.

### YOLO.

**APRICOT PIT CRACKER.**—Woodland Mail: W. G. Read of the Read Almond Huller & Cleaner Manufacturing Co. at Davisville is the inventor of a new machine, called an apricot pit cracker, which was given its initial test at the company's plant in Davisville Monday, and which worked very satisfactorily in every particular. It not only cracks apricot pits, but separates the kernel from the hull and the former is cleaned and gathered ready for shipment. With the recent demand and good prices for apricot pits, Mr. Read pushed to completion a machine upon which he has been working for some time past, and which promises to be a very popular machine in time to come. Mr. Read is now purchasing apricot pits and has paid as high as \$12 per ton for them.

**PEARS GOOD PROPERTY.**—Woodland Democrat: R. I. Blowers received a telegram from New York announcing the sale of a carload of 532 boxes of pears for the gross sum of \$1731.38. As far as we know this is the highest price ever realized for Bartlett pears in carload lots.

### YUBA.

**HOP NOTES.**—Wheatland Four Corners: Hop pickers are leaving Wheatland striking for other points. Many have enough work and money for the season and are going home, while others are off for the Sacramento and coast hop fields. The price has remained at 80 cents this season, and pickers have made good wages, as the hops were easy to pick and lost no weight by being overripe. Horst Bros. and P. C. Drescher shipped several carloads of hops this week to fill early orders. By next week several dozen cars will be shipped out. Prospects for good prices this year are far from bright, and unless the English crop falls far below the present calculations hops are expected to rule low.

### NEVADA.

**RAIN DESTROYS HAY.**—Red Bluff News: A letter received from Paradise valley, Nevada, forty miles north of Winnemucca, states that a heavy rain recently fell in that valley which destroyed hundreds of tons of hay that had been cut.

**WANTS HIS ASSESSMENT RAISED.**—Truckee Republican: John Sparks, the well-known cattleman of Reno, has a curious complaint to make against the Assessor of Washoe county. That official assessed Mr. Sparks' cattle at \$50 a head and he insists that they should be assessed at \$70 a head. A bull that was listed at \$100 is to be raised to \$500. This may seem strange on the part of Mr. Sparks, but there is method in it, as Mr. Sparks is a famous dealer in thoroughbred cattle and he wants the figures to back up his prices.

### OREGON.

**GOVERNMENT TEARS DOWN FENCES.**—Ashland, Aug. 31: Deputy U. S. Marshal S. D. Morse returned from Tulare lake, in Klamath county, this morning, where he went to carry out the instructions of U. S. Judge Bellinger to tear down the fences erected by the Jesse D. Carr Land & Livestock Co., illegally inclosing 80,000 acres of the public domain. Contrary to expectation, there was no objection made by the representatives of the Carr Co. to the razing of the fences. With the assistance of some of the company's employees, the Deputy U. S. Marshal made extensive openings in the fence for a distance of four townships. The condition of the 80,000 acres of Government land is in such shape now that the flocks and herds of cattlemen and settlers of Klamath county have free access to the immense body of land that the Carr Co. has had the exclusive use of for so many years.

## Horse Owners! Use

COMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.





## THE HOME CIRCLE.

### The End of Summer.

Pods are the popples, and slim spires of pods  
The hollyhocks; the balsam's pearly  
breds  
Of rose-stained snow are little sacs of  
seeds  
Collapsing at a touch; the lote, that  
sods  
The pond with green, has changed its  
flowers to rods  
That balance cell-pierced discs; and all  
the weeds,  
Around the sleepy water and its reeds,  
Are one white smoke of seeded silk that  
nods.  
Summer is dead, ay me! sweet summer's  
dead!  
The sunset clouds have built her funeral  
pyre,  
Through which, e'en now, runs subter-  
anean fire;  
While from the east, as from a garden  
bed,  
Mist-vined, the dusk lifts her broad  
moon, like some  
Great golden melon, saying, "Fall has  
come."

—Century.

### One Touch of Nature.

He hadn't slept soundly. He rarely  
slept soundly now. It wasn't his age,  
surely; he was only 57; and it couldn't  
be his business affairs, for all his in-  
vestments were sound and highly re-  
munerative and his large income was  
rapidly increasing. No, he must look  
for the cause elsewhere. Perhaps it  
would be well to consult a doctor.  
He arose and, lighting the gas,  
looked at his watch. It was 4:30. He  
went to a window that faced the east  
and raised the sash. The air came in  
cool and fragrant. Low down by the  
far-away ridge streaks of pale blue  
light were showing.

"I'll see this sunrise," said Amos  
Brandon. "I haven't seen one since  
I was a boy." He hastily bathed and  
dressed himself. "I'll see it from the  
outside," he added, and, softly creeping  
down the stairway, found his hat, and  
opening the great door, descended the  
stone steps that led to the street.

As he faced the east and moved  
slowly along the avenue he snuffed the  
air and found it good. He even took  
off his hat and let it cool his head.

"It certainly seems to me that this  
is better than tossing on that comfort-  
less mattress," he muttered. "Wonder  
why I never thought of it before?"

The pale streaks in the east grew  
broader, a pink flush rose behind the  
wooded crest, the clouds became hazy.  
Swiftly the flush deepened, spokes of  
light were flung upward and then came  
the sun.

Amos Brandon walked slowly on-  
ward, eagerly watching those magic  
changes.

"Oh," he said, that's fine; it's worth  
the trouble. How many people know  
anything about it? Precious few.  
Look at the present audience. One  
restless, lonely old man, and a night  
watchman or two. What a shame!"

He came to a street intersectioned  
then paused and looked at his watch.

"Quarter to five," he muttered.  
"No, I'll not go home. I feel like a run-  
away boy. I'll stroll down to the lake.  
I don't believe I've really seen the lake  
in a dozen years."

He walked at a leisurely gait,  
breathing in the tonicky air and ever  
and anon turning his gaze on the sun-  
tinted clouds. His eyes were brighter  
and his step more elastic. Laboring  
men, swinging their dinner boxes,  
looked around as they passed him. His  
was an unusual figure at that early  
hour. Once he heard a man repeat  
his name to his companions and they  
all stared curiously at him as they  
passed.

As he came within sight of the lake's  
blue ripples a girl came across the  
avenue and turned in on the sidewalk  
just ahead of him. She was a girl of  
perhaps fourteen, rather slender, with  
clear olive complexion and thick dark  
hair. She was neatly dressed, save  
her shoes, which were dingy and frayed,  
and in her hand she carried a basket,  
whose contents were concealed be-

neath a white paper. Amos Bran-  
don quickened his steps a little.

"You are an early riser," he said  
to the girl. At that moment he was  
interested in early risers.

"Yes, sir," said the girl, who  
showed no surprise at his abrupt re-  
mark. "I have to carry my father's  
breakfast to him. He is a help at the  
mills over there." She pointed to a  
long row of dingy buildings not far  
ahead.

She spoke well and with a lack of  
constraint that the old man admired.

"Why doesn't your father come  
home to his breakfast?" he asked.

"He goes to work at midnight and  
quits at noon," she answered.

"And how far do you come?"

"About a mile and a half."

She gave a little nod and turned to  
cross a vacant field that would save  
her a few steps. Amos watched her  
for a moment as she sturdily stepped  
forward.

"A good little woman, and her fa-  
ther should be proud of her. I hope he  
is." He sighed softly, as he plodded  
on.

He enjoyed the lake, with its dimply  
surface and the swash of the little  
waves as they struck the piling, and  
the black banner of smoke trailing af-  
ter a far-away steamer. Presently he  
turned and strolled over toward the  
iron mills. Almost in a moment he  
came upon the girl of the lunch basket.  
She was sitting on a low pile of boards  
and close beside her sat a workingman,  
bare-armed and sinewy, a swarthy  
man with small, black eyes, and a  
short, black beard. He was eating  
with evident enjoyment the breakfast  
the girl had brought him. Amos Bran-  
don paused at the picture; it pleased  
him. He nodded smilingly to the girl,  
who nodded back, and when the swarthy  
man looked up he nodded to him, too.  
Amos leaned against a pile of lumber.

"Your load will be lighter on the  
way back," he said to the girl.

"Yes," she answered, "father al-  
ways has a good appetite."

The swarthy man looked up. He nod-  
ded gravely to Amos.

"She's a good girl," he said, slowly.  
"Come long way."

"Yes," said Amos. "I'm sure she's  
a good girl."

The swarthy man looked around at  
the object of his praise. There was  
fondness in his glance.

"Smart girl, too," he said. "Teacher  
say smartest girl in the English  
school." He said this with some dif-  
ficulty, but with evident gratifica-  
tion.

"Oh, father," cried the child, with a  
swift little blush.

Then the swarthy man's rough voice  
grew softer.

"She's all I got," he said.

"I see," said Amos Brandon.

"Mutter dead, brudder dead, sister  
dead. Only Lena left." He turned  
a little and softly stroked the girl's  
hand.

Something rose in the rich man's  
throat, and a mist swam before his  
eyes.

"Father thinks I should wear my  
best shoes," she explained. "He  
doesn't know how fast this walk would  
wear them out."

"Best shoes," echoed the swarthy  
man; "yes, yes, best shoes." He  
looked at Amos Brandon. Then he  
softly touched the girl's shoulder with  
a forefinger and struck himself sharply  
on forearm and chest.

"She's what I work for," he smil-  
ingly said.

"I must go," remarked Amos Bran-  
don, hurriedly. He paused and stepped  
forward. "I would like to shake hands  
with you," he said to the swarthy man,  
who met the advancing fingers with a  
warm grasp. Amos nodded to the  
girl and strode away.

There was a crosstown car waiting  
for the signal to start. He caught it  
and in twenty minutes later opened the  
front door of his house. The house-  
keeper met him in the hall. Her anx-  
ious face cleared.

"Glad you have returned, Mr. Bran-  
don," she said. "We were beginning  
to worry a little over your unusual ab-  
sence."

"Out for an early stroll, Mrs. Em-

erson," he said. "Kindly have break-  
fast ready in half an hour."

He stepped into the library and  
opened his desk. For a moment he  
sat in deep thought. Then he rapidly  
indited his letter:

"MY DEAR MARY—I find it quite im-  
possible to hold out any longer. I  
am growing old and need you, dear  
child. The door from which I turned  
you two long years ago is open for you  
and yours. You are all I have in the  
world, dear. Without you the house  
is cold and desolate. For what have  
I been toiling all these years but for  
you? Come back to me, daughter,  
and all will be forgotten. Tell your  
husband that a hearty handclasp  
awaits him. Say to him that I confess  
that I sorely misjudged him.

"Write to me, dear, as soon as you  
receive this, and tell me when to ex-  
pect you and George. Your affection-  
ate father.  
AMOS BRANDON."

He looked at the letter when he had  
finished it, and shook his head. Then  
he carefully read it through. Again  
he showed disapproval. After a  
moment or two he raised the sheet  
and deliberately tore it to bits of  
jagged paper and tossed them into the  
waste basket.

"Pshaw," he smilingly uttered,  
"that's too slow. I'll hurry down and  
telegraph Mary that I'm coming for  
them, and then I'll follow by the first  
train."

The housekeeper stood in the door-  
way.

"Breakfast is ready, Mr. Brandon,"  
she announced.

The rich man whirled toward her.

"Mrs. Emerson," he said, "I want  
you to put Mary's rooms into the  
nicest possible shape at once."

The housekeeper started.

"Is Miss Mary coming home, sir?"  
she eagerly asked.

"Yes," said Amos Brandon, "she's  
coming home."—W. R. Rose.

### Some Things That Are Not So.

Cayenne pepper does not come from  
a pepper plant, nor Burgundy pitch  
from Burgundy. Jerusalem artichokes  
do not come from Jerusalem, nor turk-  
eys from Turkey. Camel's hair brushes  
are made from the tail of the squirrel.  
German silver is not silver, and it was  
invented in China. Cork legs are not  
made of cork; neither do they come  
from Cork, Ireland. Prussian blue  
does not come from Prussia. Irish  
stew is not an Irish but an English dish.  
Cleopatra's Needle was set up a thou-  
sand years before that lady was born.  
Shamoy leather is not the hide of a  
chamois, but the flesh side of sheep-  
skins.

### Light in the Sick Chamber.

The quantity of light admitted into  
the sick chamber is a matter of im-  
mense importance to its suffering occu-  
pant. As light is an element of cheer-  
fulness, it is on that account desirable  
that as much should be admitted as the  
patient can bear without inconvenience.  
The light should be soft and subdued,  
not glaring, and care should be taken  
that bright, lustrous objects, such as  
crystals and looking-glasses, should be  
kept out of the patient's view, and that  
neither the flame of a lamp or candle  
nor its reflection in a mirror be suffered  
to annoy him by flashing across his field  
of vision.

"SHE talked to him just to let him  
know she wasn't afraid of old bache-  
lors."

"Yes?"

"And he talked to her just to let  
her know he wasn't afraid of widows."

"Well?"

"Oh, they're married now."—Chi-  
cago Record.

"JOSIAR," said Mrs. Cornstossel,  
"what is these negligay shirts I see ad-  
vertised in the bargain sales?" "Well,  
they ain't quite so prim an' scratchy as  
a b'iled shirt—that is to say, a reg'lar  
hard-b'iled shirt. I reckon negligay is  
what you might call a soft-b'iled shirt."  
—Washington Star.

### Early Risin'.

Written for the PACIFIC RURAL PRESS by  
IRA W. ADAMS.

I never really did believe in very early  
risin'.  
In gettin' up from day to day before the  
daylight's peepin'.  
Just let 'er peep—that's just the sweetest  
time on earth  
To do some real old-fashioned kind of  
sleepin'.

What is the use, I'd like to know, of this  
eternal rushin'?

It goes against the grain somewhat, in  
my poor way of thinkin';

A putterin' round by lantern light a doin'  
up the chores,

Before the silver stars of night have  
hardly ceased their winkin'.

I'd never leave my cozy bed when I was  
young and growin',

Before the birds were singin' or the  
roosters started crowin';

There was plenty time enough for me  
when "Old Sol" was a shinin',

To do up all my plowin' my reapin' and  
my mowin'.

And now, at three-score years and ten, it's  
not at all surprisin',

When the golden streams of daylight  
through my window blinds come  
creepin',

That I quickly close my eyes upon the  
bold but sly intruder,

And spend another quiet hour in sweet,  
refreshin' sleepin'.

Bay State Home, Calistoga.

### The Annexation of Cuby.

A new humorist, Miss Alice Caldwell  
Hegan, contributes to the September  
Century a short story about the physical  
salvation of a horse.

The Wiggsses lived in the Cabbage  
Patch. It was not a real cabbage  
patch, but a queer neighborhood where  
ramshackle cottages played hop-scotch  
over the railroad tracks. The Wiggs  
family consisted of Mrs. Wiggs and five  
children. The boys were named Jim  
and Billy, but it was Mrs. Wiggs's boast  
that her three little girls had geography  
names. First came Asia, then Aus-  
tralia. When the last baby arrived,  
and Billy stood looking down at the  
small bundle, he had asked anxiously:  
"Are you goin' to have it fer a boy or a  
girl, ma?" Mrs. Wiggs had answered:  
"A girl, Billy, and her name is Euro-  
pena."

Hard work and strict economy were  
necessary in the little household. Mrs.  
Wiggs took in washing, Jim worked at  
the factory, and the others helped as  
best they could.

The direct road to fortune, however,  
according to Billy's ideas, could best be  
traveled in a kindling wagon, and while  
he was the proud possessor of a broken-  
down wagon, sole relic of the late Mr.  
Wiggs, he had nothing to hitch to it.  
Scarcely a week passed that he did not  
agitate the question, and as Mrs.  
Wiggs often said:

"When Billy Wiggs done set his head  
to a thing he's as good as got it."

Consequently she was not surprised  
when he rushed breathlessly into the  
kitchen one evening about supper time,  
and exclaimed in excited tones:

"Ma, I've got a horse! He was  
havin' a fit on the commons, an' they  
was goin' to shoot him, an' I ast the man  
to give him to me."

"My land, Billy! what do you want  
with a fit horse?" asked his mother.

"'Cause I knowed you could cure him.  
The man said if I took him I'd have to  
pay fer cartin' away his carcass; but I  
said all right, I'll take him anyway.  
Come on, ma, an' see him!" And Billy  
hurried back to his new possession.

Mrs. Wiggs pinned a shawl over her  
head and ran across the commons. A  
group of men stood about the writhing  
animal, but the late owner had de-  
parted.

"He's 'most gone," said one of the  
men as she came up. "I tole Billy  
you'd beat him fer takin' that ole nag  
offen the man's han's."

"Well, I won't," said Mrs. Wiggs,  
stoutly. "Billy Wiggs 's got more  
sense than most men I know. That  
hoss's carcass is worth somethin'. I  
spect he'd bring 'bout \$2 dollars dead  
an' mebbe more livin'. Anyway, I'm



goin' to save him if there's any save to him."

She stood with her arms on her hips and critically surveyed her patient. "I'll tell you what's the matter with him," was her final diagnosis; "his lights is riz. Bill, I'm goin' home fer some medicine. You set on his head so's he can't git up, an' ma'll be right back in a minute."

The crowd which had collected to see the horse shot began to disperse, for it was supper time, and there was nothing to see now but the poor suffering horse with Billy Wiggs patiently sitting on his head.

When Mrs. Wiggs, returned she carried a bottle and what appeared to be a large marble. "This here is a calomel pill," she explained. "I jes rolled the calomel in with some soft light bread. Now you prop his jaw open with a little stick, an' I'll shove it in; then hole his head back, while I pour down some water an' turkentine outen this bottle."

It was with great difficulty that this was accomplished, for the old horse had evidently seen a vision of the happy hunting ground and was loath to return to the sordid earth. His limbs were already stiffening in death, and only the whites of his eyes were visible. Mrs. Wiggs noted these discouraging symptoms, and saw that violent measures were necessary.

"Gether some sticks an' build a fire quick as you kin. I've got to run over home. Build it right up clost to him, Billy; we've got to git him het up."

She rushed into the kitchen, and taking several cakes of tallow from the shelf, threw them into a tin bucket. Then she hesitated for a moment. The kettle of soup was steaming away on the stove, ready for supper. Mrs. Wiggs did not believe in sacrificing the present need to the future comfort. She threw in a liberal portion of pepper, and seizing the kettle in one hand, and the bucket of tallow in the other, she staggered back to the bonfire.

"Now, Billy," she commanded, "put this bucket of tallow down there in the hottest part of the fire. Look out, don't tip it—there! Now you come here an' help me pour this soup into the bottle. I'm goin' to git that ole hoss so het up he'll think he's havin' a sunstroke. Seems sorter bad to keep on pesterin' him when he's so near gone, but this here soup'll feel good when it once gits inside him."

When the kettle was empty, the soup was impartially distributed over Mrs. Wiggs and the patient, but a goodly amount had "got inside," and already the horse was losing his rigidity.

Only once did Billy pause in his work, and that was to ask:

"Ma, what do think I'd better name him?"

Giving names was one of Mrs. Wiggs's chief accomplishments, and usually required much thoughtful consideration; but in this case, if there was to be a christening, it must be at once.

"I'd like a jography name," suggested Billy, feeling that nothing was too good to bestow on his treasure.

Mrs. Wiggs stood with the soup dripping from her hands, and earnestly contemplated the horse. Babies, pigs, goats, and puppies had drawn largely on her supply of late, and geography names especially were scarce.

"I'll tell you what, Billy, we'll call him Cuby! It's a town I heard 'em talkin' 'bout at the grocery."

By this time the tallow was melted, and Mrs. Wiggs carried it over to the horse and put each of his hoofs into the hot liquid, while Billy rubbed the legs with all the strength of his young arms.

"That's right," she said. "Now you run home an' git that piece of carpet by my bed, an' we'll kiver him up. I am goin' to git them fence rails over yonder to keep the fire goin'."

Through the long night they worked with their patient, and when the first glow of morning appeared in the east, a triumphant procession wended its way across the Cabbage Patch. First came a woman bearing sundry pails, kettles, and bottles; next came a very sleepy little boy leading a trembling old horse, with soup all over his head, tallow on his feet, and a strip of rag carpet tied about his middle.

Thus Cuby, like his geographical

namesake, emerged from a violent ordeal of reconstruction with a mangled constitution, internal dissension, a decided preponderance of foreign element, but a firm and abiding trust in the new power with which his fortunes had been irrevocably cast.

#### Rescuing a Pack Horse.

In a paper entitled "The Crown of the Continent," in the September Century, George Bird Grinnell describes a misadventure which befell an exploring party in the St. Mary's Lake country in northern Montana.

For a few yards below the crossing, the sharply sloping mountain side is overgrown with alders, and then breaks off in a cliff 100 feet high. The trail is 12 or 15 inches wide, but appears narrower, for the summer's growth of weeds, grass, and alder sprouts extends out over it. The man who was in advance was on foot, leading a pack-horse. After him came another loaded animal, and this was closely followed by two horsemen. When these were within a few yards of the brook crossing they heard a yell of dismay from the man in front, and then a shout: "The black mare has rolled down the hill!" Slipping off their horses and leaving them standing in the trail, they ran forward, and reached the scene of disaster just in time to see the second pack horse spring upon a large flat rock which lay in the way, and as its four unshod feet came down on the smooth stone, it slipped, lost its footing and rolled slowly off the trail. It had not fairly got started before the men had it by the head and had stopped its descent, holding it by the loosened hackamore. The animal made one or two struggles to regain its footing, but the brush, the slope, and its load made it impossible for it to rise, and it lay there while the three men held it. Meanwhile the black mare by a lucky chance had regained her feet before reaching the precipice, and was now making her way up the slope toward the trail.

To get the pack off the fallen beast was the first thing to be done. A man climbed down the rocks behind the horse, so as to be out of the way of its feet if it should flounder, and cut the lacing which attaches the hook to the lash cinch, thus freeing the load, which was then readily pulled aside, and with a little effort and help the horse stood on its feet.

LITTLE Philip wanted to go visiting the other day. He longed to go to see Mazie, who lives nearly two blocks away. After a good deal of teasing, his mother said he might go.

"And may I stay to lunch?" the boy asked.

"You may if Mazie's mother asks you to," was the reply. "If she doesn't, be sure to come home before noon."

Philip reached Mazie's house a few minutes later and galloped up on the porch where the little girl's mother was sitting.

"Mrs. Parker, he said, half out of breath, 'I've come to play with Mazie all day, and my mother says I must not stay here to lunch unless you asked me to, but I ain't hungry yet.'"

He was invited to stay.—Record-Herald.

"Did you ask papa?" she questioned, eagerly.

"Yes; and it's all off," he responded, as one in a dream.

"Why, did he refuse?"

"No; but he said when I asked to take you away from him I was asking to take away the light of his life; that the home without you would be a prison cell."

"Well, all papas say that, you big, tender-hearted fellow."

"I know," he responded, huskily; "but it isn't that."

"What is it, then?"

"Can't you see? He expects me to take you away from home, and I wouldn't have the nerve after he talked like that to stay—and—er—well, don't you see?"

"I see," she answered, coldly.—Indianapolis Sun.

## DOMESTIC ECONOMY.

### Domestic Hints.

**GRAPE JAM.**—Wash and stem the grapes; throw them into a kettle with just sufficient water to come to the surface. Boil for twenty minutes or until the grapes are soft. Press through a colander. Measure, and to each pint allow half a pound of sugar. Mix the two together and boil for twenty minutes. When cool seal.

**COFFEE WHIP** (TO BE SERVED IN GLASSES).—Place two tablespoonfuls of unground coffee in a pan and brown it, if already roasted heat until very hot stirring all the time; turn at once into one pint of rich, cold cream with two tablespoonfuls of fine sugar and stir a minute. Let it become very cold, remove the coffee and whip to a stiff froth.

**TO BOIL RICE PLAIN.**—Wash half a cupful of rice, drain from the water, have on a fire a very large saucepan nearly full of salted boiling water. Turn the rice into this and boil hard for twenty minutes, pour all into a colander, drain well, and put the rice in a smaller saucepan on the back of the stove, where it will be kept warm, without cooking, until moisture has evaporated. Then serve.

**CURRIED EGGS.**—Slice two onions and fry them in butter; mix with a pint of good broth, to which has been added a tablespoonful of Maharajah Royal India curry powder well stirred in. Stew until quite tender. Mix with this a cup of cream and thicken with arrowroot or cornstarch. Simmer a few minutes, then add six or eight hard-boiled eggs cut in slices; heat this thoroughly, but do not allow it to come to a boil.

**LITTLE-NECK CLAM SALAD.**—Roast two dozen small little-necks, put them in a bowl and cover them with a plain dressing; let them stand half an hour. Put into the salad bowl the inside leaves of two heads of lettuce, add to it half a pint of cooked shrimps, cold. Add the clams next and cover with a remoulade sauce, which is made the same as mayonnaise, with the exception that hard-boiled egg yolks are used instead of the raw egg.

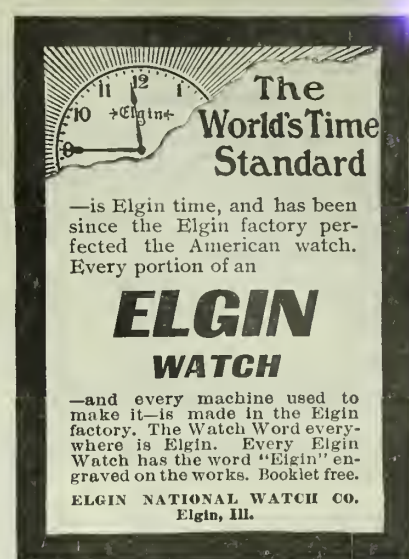
**LAMB KIDNEYS ON TOAST.**—Skin half a dozen lamb's kidneys, cut in halves, remove all the fibers, and leave soaking for fifteen minutes in a pint of boiling water containing a couple of teaspoons of vinegar. Melt a tablespoonful of butter in a saucepan, roll the kidneys in flour, and put them in butter; let them cook five minutes, stirring constantly. Then add a couple of tablespoonfuls of chopped parsley, and either a wineglass of white wine or half as much sherry and a little hot water. Let them simmer five or ten minutes longer, then season to taste, with salt and pepper, Cayenne being best. Serve on toast, or pile the kidneys on a platter, pour the gravy over, and decorate with my tiny squares of toast.

### Hints to Housekeepers.

Stock, to be used in preparing purees or sauces, is made from the neck or shin of beef. Four quarts of water to four pounds of meat is the proper proportion. Place the meat in the stock pot, add the water, and then proceed as directed for consomme.

In place of creamed oysters, that have occupied an honored place in the bill of fare during the winter, creamed chicken or sweetbreads will be found equally delightful. For every pair of sweetbreads allow one can of mushrooms or three pounds of chicken. Parboil and pick apart the sweetbreads, or cut the chicken into dice, and wash and chop the mushrooms fine. Make two cupfuls of cream sauce, allowing one tablespoonful of flour and the same quantity of butter to every cupful of cream. Add the mushrooms and sweetbreads. Season with salt and paprika and a teaspoonful of chopped parsley as it is wanted.

Nothing is so hard to get rid of as freckles, and the better way is to avoid acquiring them, if possible. You should never go on the water or even to walk



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without a sunshade, whether you wear a hat or not. If you indulge in sea bathing, be sure to wear a broad-rimmed hat to shade the face. After exposure to sun or wind in walking, driving or bathing, apply a lotion made of one-half ounce of rosewater, three grains of borate of soda and a half pound of orange flower water. It is wise also to apply cold cream to the face; before going out wipe it off with a soft cloth and dust rice powder lightly over. With these precautions one is moderately certain to keep free from the blemish of freckles.

To stew green corn husk and clean as for boiled corn. With a sharp knife cut off the top of the grains without cutting close to the cob, and with the back of the knife press out the remaining pulp. When cut in this way the corn is much juicier than when the grains are cut close to the cob. Butter well (to prevent sticking) the inside of a granite kettle, add a cup of milk, more or less, according to the quantity and juiciness of the corn. When boiling add the corn, cook from ten to fifteen minutes, or until it loses its raw taste, stirring frequently, and season to taste with salt, pepper, butter and sugar.

A dainty little bag to hold soiled neckbands is made from two lawn handkerchiefs. Choose two alike having a pretty embroidered edge, and put them together to form the bag. Those with a rather narrow embroidery should be selected, and they are stitched together around three sides, just below the embroidery, to form a frill. Around the opening at the same distance from the edge stitch a beading, through which ribbon of the desired width is run. A narrow ribbon is to be preferred. These can hang at the side of a dressing table or bureau, and are both useful and ornamental.

Tomatoes canned whole for salads will prove convenient in the winter. Small, plump, round ones should be selected for the purpose. To scald them, put them into a wire basket and plunge once or twice in deep boiling water. Peel carefully and put them into jars that have been thoroughly cleaned. Fill jars with cold water and add a teaspoonful of salt to each. Arrange the rubbers and put the covers on loosely. Put the jars in a big boiler on muffin rings or something that will keep them from the bottom. Add cold water until it reaches two-thirds the height of the jars. Boil ten minutes after the water reaches the boiling point.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Sept. 4, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	72% @ 71 1/4	76% @ 75 1/4
Thursday.....	71% @ 71	75% @ 74 1/4
Friday.....	71 1/4 @ 72 1/4	75% @ 75 1/4
Saturday.....	* @ —	@ —
Monday.....	* @ —	@ —
Tuesday.....	71% @ 71	75% @ 74 1/4

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	36 @ 35	38% @ 37 1/2
Thursday.....	35% @ 35	37% @ 37 1/2
Friday.....	35 @ 35 1/4	37% @ 37 1/2
Saturday.....	* @ —	@ —
Monday.....	* @ —	@ —
Tuesday.....	35% @ 34 1/4	37% @ 37 1/2

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cent was as follows:

	Dec.	May.
Thursday.....	1 00% @ 1 00 1/4	1 04% @ —
Friday.....	1 00% @ —	@ —
Saturday.....	* @ —	@ —
Monday.....	* @ —	@ —
Tuesday.....	1 00% @ —	@ —
Wednesday.....	1 00% @ —	1 04% @ —

\*Holiday.

## WHEAT.

Not much life has been displayed in the local wheat market since last review, and with holidays and strikes and mob warfare, it is not surprising that very little was accomplished in the grain trade. There is a big fleet of ships here to be loaded and large quantities of grain are exposed to the elements, with poor prospects of moving the same before rains set in. These strikes are working serious loss to the farmers of the State, who have nothing whatever to do with, and are in no way responsible for, the differences at issue between the labor unions and the employers. Only two cargoes of wheat were sent afloat from this port in August, where there should have been at least two dozen. A few ships are now loading, but it is doubtful if September makes as good a showing in the way of wheat exports as the number of vessels and the amount of wheat now available admit of and the interests of farmers require. Under existing conditions, the market has naturally not shown firmness, although quotable values have not been materially disturbed. There is a fair foreign demand, but no pronounced shortage in sight at present in any part of the world.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cent for the week were as follows for the options named:

December, 1901, delivery, \$1.00 1/4 @ 1.00 1/2.  
May, 1902, delivery, \$1.04 1/4 @ —.  
Wednesday, at regular noon session of Call Board for December, 1901, wheat, \$1.00 1/2 was bid, \$1.00 1/4 asked; May, 1902, sold at \$1.04 1/2.

California Milling.....	\$1 00 @ 1 05
Cal. No. 1 shipping, alongside.....	96 1/4 @ 98 1/4
Oregon Valley.....	97 1/4 @ 1 02 1/4
Washington Blue Stem.....	1 00 @ 1 05
Washington Club.....	97 1/4 @ 1 00
Off qualities wheat.....	95 @ 97 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	68 1/4 @ 65 1/2	58 1/4 @ 60 1/2
Freight rates.....	38% @ 40s	37% @ 38 1/4s
Local market.....	\$1 05 @ 1 07 1/4	96% @ \$1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on September 1st and August 1st:

Tons—	Aug. 1st.	Sept. 1st.
Wheat.....	70,868	*110,871
Barley.....	40,649	†66,543
Oats.....	3,231	4,109
Corn.....	342	171

\*Including 68,508 tons at Port Costa, 41,131 tons at Stockton.

†Including 43,195 tons at Port Costa, 21,247 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show an increase of 40,003 tons for the month of August. A year ago there were 177,171 tons wheat in Call Board warehouses.

## FLOUR.

Considering the slow movement in most lines of produce, the exports of flour are proving of fairly respectable proportions, going mainly by steamer to South America

and China. Most of the flour going outward is being delivered on contracts. Local business is very light. Quotations are unchanged, but market inclines in favor of buyers.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

There is an active demand from Europe and the Eastern States for barley to be used for brewing, but most of the barley inquired for is wanted in the very near future, to have it abroad in time for the malting season. If the existing strikes continue much longer, some of the large orders now on market will likely go unfilled, owing to inability to get the grain afloat within the required time. Two large steamer cargoes, aggregating 11,000 tons and having a clearance valuation of \$196,000, were sent outward the past week, bound to St. Vincent for orders. Some shipments are also being made to New York per regular steamer lines. While not quotably higher, the market for all shipping grades is firm at existing quotations. Trading in feed descriptions is light and almost wholly on local account. Market for feed barley is easy in tone.

Feed, No. 1 to choice.....	72% @ 75
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	77% @ 83 1/4
Chevalier, No. 1 to choice.....	1 00 @ 1 05
Chevalier, poor to fair.....	75 @ 90

## OATS.

The market is not displaying much activity, buyers' needs being in the main less urgent than they were a few weeks ago. There is an easier tone, and prospects that prices will average lower as soon as Oregon and Washington oats of current crop begin to arrive freely. Liberal receipts from the north are looked for in a few weeks.

White Oats, fancy feed.....	1 30 @ 1 25
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 17 1/2
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 22 1/4 @ 1 30
Black Russian.....	85 @ 1 15
Red.....	95 @ 1 25

## CORN.

Market continues to be so lightly supplied with both domestic and imported that there is very little upon which to base quotations. Nearly all the white corn lately offered has been taken for shipment to Mexico.

Large White, good to choice.....	1 70 @ 1 75
Large Yellow.....	1 65 @ 1 70
Small Yellow.....	1 75 @ —
Eastern, in bulk (carload lots).....	1 60 @ —

## RYE.

There has been some recent purchasing for export at 75 @ 77 1/2c., Port Costa delivery, but scarcely anything doing on local account.

Good to choice, new.....	77% @ 80
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## BUCKWHEAT.

Local millers are expecting arrivals of new, and are sparing no pains to talk prices down to the utmost limit possible. There have been no recent transfers, so far as reported.

Good to choice.....	1 45 @ 1 60
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## BEANS.

Not much stock in this center, either new or old, upon which to operate at present. A few new beans, principally Lady Washingtons and Black-eyes, are putting in an appearance, and dealers are endeavoring to bear down values, with a view of laying in stocks of new crop. With no old beans of consequence to contend against, however, and nothing to indicate that supplies of new will prove excessive this season, there is no good reason why growers should not realize profitable figures for most varieties of the crop now being harvested. Horse beans have been ruling low, largely on account of many offerings showing devastations of a bug which germinates on the inside.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 90 @ 5 00
Lady Washington.....	3 25 @ 3 75
Pinks.....	2 40 @ 2 50
Bayos, good to choice.....	2 75 @ 2 85
Reds.....	3 00 @ 3 25
Red Kidney.....	4 00 @ 4 25
Limas, good to choice.....	6 40 @ 6 50
Black-eye Beans.....	3 25 @ 3 50
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

An inactive market is noted, with values nominally the same as have been current for some time past. Choice Green are steadily held. To effect free sales of Niles at this date, comparatively low figures would probably have to be accepted.

Green Peas, California.....	2 25 @ 2 50
Niles Peas.....	1 50 @ 1 75

## WOOL.

A healthy tone prevails in the wool market, but there is not much doing here, as wools are not offering in sufficient quantity to enable operators to do any wholesale purchasing. Much of the Fall wool is being picked up in the interior, in the interest of local handlers and Eastern dealers and manufacturers. Business doing locally is within range of quotably unchanged values.

## SPRING.

Humboldt and Mendocino.....	14 @ 16
Humboldt and Mendocino Lambs.....	11 @ —
Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Mountain, free.....	9 @ 11
San Joaquin and Plains.....	6 1/4 @ 8
San Joaquin Lambs.....	7 @ 9

## HOPS.

A few new hops have arrived, but nothing of consequence has been yet done in them, and it looks as though trade in this line would be on a drag for some weeks to come. Dealers talk 10 @ 11c. for choice, while growers as a rule have higher views and refuse to accept the prices named.

Good to choice 1901 crop.....	11 @ 13
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## HAY AND STRAW.

The unsatisfactory condition previously noted as prevailing in the hay market continued to be experienced the current week. Both buyer and seller, producer and dealer, are laboring to serious disadvantage, in consequence of the prolonged strike preventing hay coming forward and being delivered in as large quantities as desired. The prospects are that choice hay will rule firmer later on, while damaged hay will likely be abundant and cheap.

Wheat, good to choice.....	7 50 @ 10 50
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 50 @ 9 00
Alfalfa.....	8 50 @ 10 50
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 3/4 bale.....	25 @ 40

## MILLSTUFFS.

There have been since last review no accumulations of consequence of mill offal of any sort. Prices have remained at much the same high range lately current. Rolled Barley was in fair supply and values steady. Milled Corn continues scarce and high.

Bran, 3/4 ton.....	20 00 @ 21 00
Middlings.....	21 50 @ 23 00
Shorts, Oregon.....	20 00 @ 22 00
Barley, Rolled.....	17 00 @ 17 50
Cornmeal.....	33 00 @ —
Cracked Corn.....	34 00 @ —

## SEEDS.

Mustard Seed is in too light stock in this center to be quotable at present. Growers are asking 3c per pound at primary points, but bids as a rule do not exceed 2 1/2c. Seeds quoted below are held at practically unchanged rates, with offerings and demand both light.

	Per ctt.
Flax.....	2 50 @ 3 00
	Per lb.
Canary.....	3 1/4 @ 3 1/2
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

## BAGS AND BAGGING.

The Grain Bag market has relapsed into the usual inactive condition experienced between seasons. The light business doing in Wool Sacks is at unchanged values. Fruit Bags are meeting with moderate custom, prices ruling steady.

Calcutta Grain Bags, spot.....	7% @ 8%
San Francisco Grain Bags, 22x36, spot.....	7% @ 8
Wool Sacks, 4 lbs.....	31 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 31
Fleece Twine.....	8 1/2 @ —
Gunnies.....	@ —
Bean Bags.....	5 1/4 @ 5 1/2
Fruit Sacks, cotton, three sizes.....	5 1/2, 6, 6 1/4
Fruit Sacks, Jute.....	7 @ 7 1/2

## HIDES, PELTS AND TALLOW.

The Hide and Pelt market has not developed any material change since last issue. Offerings are meeting with fair demand at prevailing values. Tallow is moving into second hands about as fast as it arrives and current prices for same are being well sustained.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, other from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/4 @ —	9 @ —
Medium Steers, 48 to 56 lbs.....	9 1/4 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/4 @ 9	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/4 @ 9	8 @ —
Wet Salted Kip.....	9 @ —	8 @ —
Wet Salted Veal.....	9 @ —	8 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —

Dry Kip and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	@ —
Salted Horse Hides, small.....	1 00 @ —	@ —
Dry Horse Hides, large.....	1 75 @ —	@ —
Dry Horse Hides, small.....	1 00 @ —	1 25 @ —
Dry Colts' Hides.....	50 @ —	@ —
Pelts, long wool, 3/4 skin.....	75 @ 1 00	@ 1 00
Pelts, medium, 3/4 skin.....	50 @ 75	@ 75
Pelts, short wool, 3/4 skin.....	30 @ 40	@ 40
Pelts, shearling, 3/4 skin.....	10 @ 25	@ 25
Deer Skins, best summer.....	35 @ —	@ —
Deer Skins, good medium.....	— @ 30	@ 30
Deer Skins, thin winter.....	— @ 10	@ 10
Elk Hides.....	10 @ 12	@ 12
Tallow, good quality.....	4 1/4 @ 4 1/2	@ 4 1/2
Tallow, No. 2.....	3 1/4 @ 4	@ 4
Goat Skins, perfect.....	30 @ 37 1/2	@ 37 1/2
Goat Skins, damaged.....	10 @ 20	@ 20
Kid Skins.....	5 @ 10	@ 10

## HONEY.

Arrivals and spot offerings are of rather moderate volume, but there is as much or more on market than can be conveniently or advantageously placed. To secure liberal wholesale custom, prices would have to be shaded in favor of buyers. In a small way for especially desirable lots slightly higher figures than are quoted are realized.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/4 @ —
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7 1/4

## BEESWAX.

Supplies are of very light volume. There is a fair export demand. Values remain without quotable change.

Good to choice, light, 3/4 lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Market for Beef is rather easy in tone, offerings proving ample for immediate requirements. Mutton is in sufficient supply for current needs, prices remaining without change. Veal and Small Lamb are both in very limited receipt, but are not quotably higher. Hogs did not sell to as good advantage as preceding week, although most offerings were needed for immediate use.

Beef, first quality, dressed, net 3/4 lb.....	6 @ 6 1/4
Beef, second quality.....	6 @ —
Beef, third quality.....	5 1/4 @ —
Mutton—ewes, 6 @ 7c; wethers.....	6 1/4 @ 7
Hogs, hard grain fed, medium.....	6 @ 6 1/4
Hogs, small, fat.....	6 @ 6 1/4
Hogs, large, hard.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	7 1/4 @ 7 1/2
Veal, small, 3/4 lb.....	9 @ 10
Veal, large, 3/4 lb.....	7 1/2 @ 8
Lamb, spring, 3/4 lb.....	7 1/2 @ 8

## POULTRY.

Chickens were in more liberal supply, as compared with the demand, than during preceding week, and values averaged slightly lower for young stock, old fowls moving at same easy rates which had been current. For a few Young Turkeys 18 @ 20c per lb. was realized, but the demand at these figures was very limited. Geese were in fair request for the Jewish holidays. Ducks had to be large and fat to receive special attention. Pigeon market was quiet.

Old Turkeys, live hens, 3/4 lb.....	11 @ 12
Old Turkeys, live gobblers, 3/4 lb.....	9 @ 10
Hens, California, 3/4 dozen.....	3 00 @ 4 50
Roosters, old.....	3 50 @ 4 50
Roosters, young (full-grown).....	4 50 @ 5 50
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 00 @ 2 50
Ducks, old, 3/4 dozen.....	3 00 @ 3 50
Ducks, young, 3/4 dozen.....	3 50 @ 4 50
Geese, 3/4 pair.....	1 50 @ 1 75
Goslings, 3/4 pair.....	1 50 @ 1 75
Pigeons, old, 3/4 dozen.....	1 25 @ 1 50
Pigeons, young.....	1 25 @ 1 50

## BUTTER.

Strictly choice fresh is not in heavy stock and such is meeting with a moderately firm market, but there is a surplus of defective qualities. Medium grades meet with but little inquiry, as the majority of consumers who are content with other than best fresh are running on cold storage stock.

Creamery, extras, 3/4 lb.....	25 @ 26
Creamery, firsts.....	22 @ 23
Creamery, seconds.....	20 @ —
Dairy, select.....	22 @ 23
Dairy, firsts.....	20 @ 21
Dairy, seconds.....	18 @ —
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll, 3/4 lb.....	19 @ 20
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/2

## CHEESE.

Stocks of domestic product are by no means heavy of either regular flats or small sizes, but at the same time there is enough for the immediate demand at full current rates. Eastern cheese is in fair supply, cheddars selling within range of 12 @ 15c., as to quality and quantity.

California, fancy flat, new.....	11 @ —
California, good to choice.....	10 @ 10 1/4
California, fair to good.....	9 1/4 @ 10
California Cheddar.....	@ —
California, "Young Americas".....	11 @ 11 1/4



## EGGS.

Strictly choice to select fresh, uniformly large and white eggs, are arriving sparingly, and for this description the market is firm, some sales being made a little above quotations. Fresh eggs which are irregular as to size, color and quality, have to sell down on a par with cold storage stock. The latter are being offered freely at easy figures.

California, select, large, white and fresh.	27	@—
California, select, irregular color & size.	25	@26
California, good to choice store.	22	@23
Eastern, good to choice.	19	@21
Cold Storage.	19	@21

## VEGETABLES.

The noteworthy feature of the market the current week is the continued brisk demand for Onions, and the stiff prices ruling on the same, a sharp advance having been established over quotable rates of preceding week. Heavy shipments are still being made to Eastern points. Other vegetables in season were in the main in ample supply for current needs, selling in most instances within same range of figures quoted in last issue.

Asparagus, 1/2 box.	—	@—
Beans, String, 1/2 lb.	1 1/2	@ 2 1/2
Beans, Lima, 1/2 lb.	2 1/2	@ 3 1/2
Beans, Wax, 1/2 lb.	—	@—
Cabbage, choice garden, 100 lbs.	55	@ 65
Cauliflower, 1/2 dozen.	40	@ 50
Corn, Green, 1/2 sack.	50	@ 75
Corn, Green, Alameda, 1/2 large crate.	75	@ 125
Cucumbers, Bay, 1/2 large box.	25	@ 40
Egg Plant, 1/2 box.	35	@ 50
Garlic, 1/2 lb.	2	@ 3
Okra, Green, 1/2 box.	40	@ 65
Onions, Yellow Danver, 1/2 cental.	1 25	@ 1 35
Peas, Sweet garden, 1/2 lb.	2	@ 2 1/2
Peas, good to choice, 1/2 sack.	—	@—
Peppers, Green Chile, 1/2 sack.	30	@ 50
Peppers, Bell, 1/2 box.	40	@ 60
Squash Summer, 1/2 small box.	25	@ 40
Summer Squash, Bay, 1/2 large box.	50	@ 75
Tomatoes, 1/2 large box.	35	@ 75
Tomatoes, 1/2 small box.	20	@ 40

## POTATOES.

Stiff prices are still being realized for potatoes, the demand from points east of the Rockies being in excess of immediate offerings. That the market will develop any special weakness for months to come does not now seem probable. Pacific coast growers with large yields of potatoes this season have certainly no just cause for complaint. Sweet Potatoes are arriving from several sections, with the demand for them not particularly brisk, and they are going at generally easy figures.

Burbanks, Salinas, 100 lbs.	1 40	@ 1 65
San Leandro, in sacks, cental.	1 40	@ 1 60
River Burbanks in sacks, cental.	1 25	@ 1 40
Mission Garnet Chile, in sacks.	1 25	@ 1 40
Sweets, new, cental.	50	@ 1 00

## The Fruit Market.

## FRESH FRUITS.

Changes were not very numerous or pronounced in quotable values for fresh fruits now in season. While receipts were of fairly liberal volume in the aggregate, the proportion of choice to select qualities was not heavy. The most urgent inquiry was for high-grade fruit, and the firmness which existed in the market was confined to fruit of this sort. Apple market was lightly stocked with choice to select, such as fine Gravenstein, and for this description of fruit the market showed firmness, with sales of superior quality, four tiers to the box, at \$1.25. Low grade Apples could not be said to be salable to advantage, although supplies of same were not especially heavy. Canners were in the market for Bartlett Pears, Peaches and Plums, but gave most attention to choice Pears and fine Clingstone Peaches. Bartlett Pears were quotable up to \$35 per ton wholesale, strictly fancy being salable for more money. Most of the wholesale business in Clingstone Peaches was within range of \$35@40 per ton for good to fairly choice, but extra large and fine were readily placed at an advance on latter figure. For choice Freestone Peaches in bulk \$30 per ton was realized, some fancy selling higher. Most of the Plums taken by canners went at \$20 per ton. The Melon market showed some improvement, more in the movement, however, than in the price. The weather was favorable for the Melon trade, but stocks of most kinds were liberal. Santa Rosa Watermelons are now arriving freely, while receipts from the southern districts are falling off. Berries showed decreased supply, and tendency, especially on best Strawberries, was to more firmness, but the improvement in prices on other berries in season was not marked.

Apples, Gravenstein, 1/4 tier box.	90	@ 1 25
Apples, Alexander, 50-lb. box.	50	@ 1 00
Apples, green, 1/2 small box.	25	@ 40
Blackberries, 1/2 chest.	3 50	@ 5 00
Cantaloupes, 1/2 crate.	50	@ 85
Figs, 2-layer box.	40	@ 75
Grapes, Seedless, 1/2 crate.	75	@ 1 00
Grapes, Black, 1/2 crate.	30	@ 60
Grapes, Fontainebleau, 1/2 crate.	30	@ 80
Grapes, Muscat, 1/2 crate.	30	@ 80
Grapes, Tokay, 1/2 crate.	30	@ 60

Logan Berries, 1/2 chest.	—	@—
Nutmeg Melons, 1/2 crate.	30	@ 50
Peaches, 1/2 box.	30	@ 65
Peaches, Freestone, 1/2 ton.	20 00	@ 30 00
Peaches, good to choice Cling, 1/2 ton	35 00	@ 45 00
Pears, Bartlett, 1/2 ton.	20 00	@ 35 00
Pears, Bartlett, 1/2 40-lb. box.	50	@ 1 25
Pears, other kinds, 1/2 box.	40	@ 75
Plums, Green Gage, 1/2 ton.	15 00	@ 20 00
Plums, large size, 1/2 ton.	20 00	@ 25 50
Plums, 1/2 crate.	40	@ 75
Prunes, 1/2 crate.	40	@ 75
Quinces, 1/2 box.	50	@ 75
Raspberries, 1/2 chest.	6 00	@ 7 00
Strawberries, Longworth, 1/2 chest.	6 00	@ 7 50
Strawberries, Large, 1/2 chest.	4 00	@ 5 00
Watermelons, 1/2 100.	5 00	@ 20 00
Whortleberries, 1/2 lb.	6	@ 8

## DRIED FRUITS.

The market for cured and evaporated fruits has not shown as much activity as for a fortnight or more preceding, but there has been no weakness developed. It was not to be expected that there would be no cessation to the active buying lately experienced. It is remarkable, in fact, that the general rush this season for most kinds of dried fruits continued as long as it did without noteworthy intermission. The lighter volume of business the current week is perhaps as much or more due to decreased offerings than to decreased demand or indifference of buyers. There has been no lack of inquiry for Apples, and market for this fruit continues to show decided strength. For choice evaporated in boxes 7 1/2 c. f. o. b. at producing points was readily realized. There is no probability of desirable qualities of Apples touching this season materially lower levels than now current. Apricot market was quiet, but quotable values were undisturbed and no appreciable depression is looked for. Current prices for Peaches are being maintained for desirable offerings, and some excellent fruit of this variety has been turned out this season. Figs are receiving a fair amount of attention and fully as much as at any time since new crop has been on the market. There are no heavy offerings of either Pears or Plums, and especially do choice Bartlett Pears make a light showing, with market for latter very firm and likely to so continue. Some business is being done in new Prunes on basis of 3 1/2 @ 3 3/4 c for the four sizes Santa Clara district, and 3 @ 3 1/2 c for the outside districts. The market is showing the most firmness relatively for the small sizes, as the Prunes are averaging large this season. Old Prunes now in stock are mostly medium sizes, there being few smaller than 80's and not many larger than 60's.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.	7 1/2	@ 8
Apricots, Royal, choice, in sacks, 1/2 lb.	9	@—
Apricots, Moorpark.	10	@ 13
Apples, in 50-lb boxes, rings, pressed, fancy.	8	@ 8 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.	7 1/2	@ 8
Figs, pressed.	5	@ 8
Nectarines, 1/2 lb.	6	@ 7 1/2
Peaches, unpeeled, fancy.	7 1/2	@ 8
Peaches, unpeeled, choice.	6	@ 6 1/2
Peaches, peeled, in boxes.	12	@ 14
Pears, halves, choice to fancy.	7	@ 8
Plums, Black, pitted.	4	@ 5
Plums, White and Red.	6	@ 7
Prunes, Silver.	5 1/2	@ 6 1/2

## COMMON SUN-DRIED.

Apricots.	6	@ 7
Apples, sliced.	4	@ 5
Apples, quartered.	4	@ 5
Figs, Black.	3 1/2	@ 4
Figs, White.	3 1/2	@ 4
Peaches, unpeeled.	5 1/2	@ 6 1/2
Pears, prime halves.	5 1/2	@ 6 1/2

## RAISINS.

There are no raisins of last crop now offering from growers, and prices for new have not yet been established. There is, consequently, nothing at the moment upon which to base quotations. Contracts for early deliveries of this year's product will doubtless soon be entered into.

## CITRUS FRUITS.

Market for Oranges was devoid of new or especially noteworthy feature, offerings and demand being both light. There was an improved demand for Lemons and Limes, owing to warmer weather, but supplies proved ample for the increased requirements, and prices showed no quotable advance.

Oranges—Valencias, 1/2 box.	2 00	@ 3 00
Lemons—California, select, 1/2 box.	3 00	@—
California, good to choice.	2 25	@ 2 75
California, common to fair.	1 00	@ 2 00
Limes—Mexican, 1/2 box.	3 50	@ 4 00

## NUTS.

In the local market there is very little doing in Almonds or Walnuts, and no spot offerings of either sort sufficient to admit of wholesale trading. Prices for new crop Walnuts are promised in about a week. The quality of the California Walnuts this year bids fair to be of high average. Peanuts are not offering in large quantity and are commanding, as a rule, full current rates.

California Almonds, shelled.	18	@ 22
California Almonds, paper shell, 1/2 lb.	12	@ 14
California Almonds, soft shell.	10	@ 12

California Almonds, hard shell.	6	@ 7
Peanuts, California, fair to prime.	4 1/2	@ 5 1/2
Peanuts, Eastern, hand-picked.	5 1/2	@ 6
Pine Nuts.	5	@ 6

## WINE.

There is nothing doing at present of noteworthy importance in the way of transfers of wines from first hands. Quotable values for wines of last year's vintage remain nominally 22@25c. per gallon. Purchases of wine grapes in Napa county are reported at \$24 per ton, several vineyards having been taken by one buyer at this figure, the purchases including some white grapes running 25 per cent sugar. Sonoma grapes are expected to average about \$23 per ton. The quotable range on dry wine grapes, as nearly as can be stated at this date, is \$20@25 per ton, as to quality, quantity and point of delivery.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.	192,242	1,013,927
Wheat, centals.	39,900	938,590
Barley, centals.	213,633	897,121
Oats, centals.	41,788	1,206,953
Corn, centals.	430	193,829
Rye, centals.	780	9,550
Beans, sacks.	2,167	53,553
Potatoes, sacks.	35,213	25,595
Onions, sacks.	6,072	244,381
Hay, tons.	2,621	31,604
Wool, bales.	1,967	41,833
Hops, bales.	14	7,229
		462

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.	189,388	832,444
Wheat, centals.	29,174	425,577
Barley, centals.	187,338	332,091
Oats, centals.	535	1,165
Corn, centals.	—	7,036
Beans, sacks.	750	1,503
Hay, bales.	1	611
Wool, pounds.	46,095	214,795
Hops, pounds.	4,431	21,005
Honey, cases.	46	1,430
Potatoes, pack's.	55	7,297
		8,934

## California Dried Fruit at New York.

NEW YORK, Sept. 4.—Evaporated apples, common, 5@8c; prime wire tray, 8 1/2 @ 8 3/4 c; choice, 9c; fancy, 9 1/2 c.  
California Dried Fruits.—Offerings only moderate, demand good and market firm at current figures.  
Prunes, 3 1/2 @ 7c.  
Apricots, Royal, 8 1/2 @ 13c; Moorpark, 9 1/2 @ 14c.  
Peaches, unpeeled, 7 @ 9 1/2 c; peeled, 11 @ 15c.

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## Ladybird Food Wanted.

Alluding again to the work with beneficial insects noted on the first page of this issue it may be noted that the vedalia cardinalis is one of his heaviest feeders and Mr. Craw is always in want of supplies of cottony cushion scale. He will pay express charges on boxes of branches infested with this scale and growers who find it should remember the offer, for if the vedalias do not have enough scales they proceed to eat each other and will disappear.

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Hatch Experiment Station, Mass.—692 lbs per hour; test skim milk...02  
Kansas State Agr. College—660 lbs per hour; test skim milk...03  
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## AGRICULTURAL ENGINEER.

### International Good Roads Congress.

TO THE EDITOR:—The Office of Public Road Inquiries is in receipt of a call for an International Good Roads Congress to be held in the city of Buffalo, State of New York, September 16 to 21, 1901. The call is issued by the National Good Roads Association of the United States, and the objects of the Congress are fully set forth in the call, from which the following portion is taken:

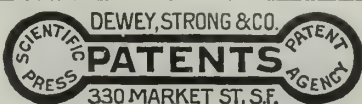
The subject of "Highway Improvement" is demanding the best thought and action throughout the nations of the world. The National Association recognizing the great importance of arousing attention, promoting discussion, stimulating scientific investigation, making practical demonstrations, collecting and disseminating information relating to the best methods of road construction and maintenance, respectively invite the General Governments of the United States and of the various other nations of the world, the Governors of the several States of the Union, Mayors of all municipalities, presidents of Boards of Trade and Road Associations and all other societies and bodies working for the improvement of the common roads, to appoint delegates to said Congress.

All sessions of the Congress will be held during the Pan-American Exposition. It is designed to devote a portion of the time included in the dates above named to demonstrate the scientific methods of modern road construction by building sections of the various classes of roads, including earth, oil, gravel, stone, tar macadam, vitrified brick, etc. A splendid railroad train equipped with modern road-making machinery will be on exhibition, and practical road experts and engineers will have charge of the work.

The scope of the deliberations of the Congress will include general discussion and exemplification of the science of road construction and maintenance, together with experimental tests and experience of the several countries of the world and the States of the Union, and the solution of the problems of road making. Addresses will be made by prominent statesmen and officials, competent engineers and scientific road experts from the various nations of the world.

The National Good Roads Association, in co-operation with the Illinois Central Railroad and this Office, has just completed a very successful good roads campaign in the States of Louisiana, Mississippi, Tennessee, Kentucky and Illinois. Over twenty miles of earth, gravel and stone roads were built and several large, enthusiastic conventions held. Thousands of people flocked to see the practical work of the "good roads train" and to participate in the deliberations of these conventions. This work has aroused throughout the country great interest and enthusiasm for better roads, and the Buffalo Congress will further promote this interest. I trust, therefore, that there will be wide attention given to the matter, and that the purposes of the Congress may be fully attained.

MARTIN DODGE, Director Office of Public Road Inquiries.  
U. S. Dept. Agr., Washington, D. C.



## THE VETERINARIAN.

### Infectious Ophthalmia in Cattle.

R. A. Craig, veterinarian at the Indiana Experiment Station, discusses a trouble which has prevailed to some extent in this State as follows: Since early in the spring reports have been received from stockmen to the effect that a strange eye disease was affecting the cattle. These reports have been received from widely separated localities, showing that the disease has a quite general distribution. In some places the cattle simply have sore eyes and in others the affection is more serious and a greater or less number go blind. The loss is not so much from the number that are blinded as to the unthriftiness occasioned, and to the diminished milk flow in dairy cattle.

This disease is infectious, and when started in a herd is likely to attack a large per cent of them before running its course. It occasionally affects sheep, but rarely horses. It has been attributed to a variety of causes, as the pollen from some plants, and to dust. The disease does usually occur at a season of the year when both pollination and dust are at their most irritating stage, but we are inclined to believe that these are only secondary causes. The germs that have been found are pus producers. This station regards the disease as one produced by a special organism. The disease is not new, having made its appearance in this State ten years ago and remained ever since.

The symptoms are local and general. The body temperature is raised, the appetite interfered with, and rumination checked. In the mild cases these symptoms are not marked. When first affected one or both eyes are held nearly closed, the lids swell, and tears pour over the face. A whitish film forms over the eyes, which may become dense. The cornea may bulge forward owing to the pressure of the abscess from within. Yellow spots from the size of a pinhead to that of a grain of corn form, and from the margin will radiate reddish lines. These are abscesses, and when they heal whitish scars will take their places. One eye may be attacked and then the other. The course will last from three to six weeks, but it rarely happens that there is complete blindness in both eyes.

The treatment is comparatively simple. Keep the badly affected cattle in the shade of a woods, or in the barn, if necessary, during the middle of the day, to prevent aggravation. Locally, apply equal parts of finely powdered boracic acid and calomel, by means of a small insect powder blower. This can be done quickly, with little restraint, and is preferable to an eye wash for the cow.

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## THE VINEYARD.

Mr. Bruck's Observations on Resistant Vines.

Mr. Bismarck Bruck of the Krug Winery, near St. Helena, gives the Calistogian the results of his observations after several days' driving through Sonoma county for the purpose of finding out the general conditions of the vineyards there and what was being done to secure new vineyards upon resistant roots. He writes:

In Alexander valley I found that the phylloxera had made considerable headway since last year and is now much farther up the valley. Where there were no apparent signs of phylloxera last year it can now be easily seen from the road. There is very little being done with resistant stock roots in that valley, and I noticed only a very few resistant vines that had been planted out in the valley.

North of Healdsburg the vines are still looking well, but the phylloxera is slowly creeping up the Russian river, and its effects are now noticeable much farther north than last year.

Between Healdsburg and Santa Rosa most of the old vineyards show more or less signs of phylloxera. On the Guerneville road some of the vines have already been pulled up, and others are now dead and will soon have to follow. From Santa Rosa south on the old Sonoma road and on the Rincon road east, the phylloxera has about finished its work, and there are but few good vineyards left.

In the Dry Creek district I was informed the vineyards were looking well, but I was unable to go there to see them.

From what I could see and learn from others, there is being but little done in Sonoma county in the way of planting resistant vines, and the farmers are slow in awakening to the fact that the phylloxera is threatening them from all sides, and it is only a question of a short time when the old vineyards will all be gone.

I think I am making a conservative estimate when I say that over 50% of the new vines planted in the last few years in Sonoma county are on non-resistant roots.

As an example of the feeling as regards the phylloxera, I will relate a conversation I had with a gentleman who had about fifty acres of non-resistant vines from one to three years old on poor soil. I asked him how long he thought they would live, and he replied from fifteen to twenty years. I then asked him if there was any phylloxera close by, and he said no. After leaving his place, I had not gone half a mile before I saw a vineyard almost entirely wiped out by phylloxera, and I venture to say in five years the others will be about in the same condition. Some of the more progressive have planted out resistant vines, some using the Riparia and others the Lenoir and Rupestris St. George.

Some have tried bench-grafting with more or less success, and Mr. McClish, the owner of a large place on the Guerneville road, informed me he felt sure bench-grafting was the proper way to secure a good resistant vineyard, and, while his success with it this year was not all he expected, he knows where he made mistakes and could correct them next year.

The vineyardists in Sonoma are apparently making the same mistakes now that were made in Napa valley—planting out resistant vines indiscriminately, without any regard for the disposition of the different stock upon the

soil which they are particularly adapted to. At this time, when the old vines are still bearing paying crops, I think it would be advisable for the Sonoma county vineyardists to try the different vines on the different soils and in different localities and discover for themselves which is the one best suited for a particular soil and locality. This would obviate the mistakes made in this valley in past years, which resulted in an enormous waste of money and time.

Our experience, I think, should be a lesson, and others ought to benefit by it. Our experience has also shown us that the Riparia will succeed only upon cool, moist, rich, loose soil, and the Lenoir only on very fertile or heavy wet clay and the Rupestris St. George on moist soils, but particularly well on well-drained soils, and is the only one that will flourish in dry, hot localities.

As to Mr. Sievers' query about gophers killing Rupestris St. George, while it is possible that the vines he speaks of were killed by gophers, I think in all probability it has been done by the wireworm, as has been the case in other places. We have never lost a Rupestris St. George from gophers, and we have had them since 1897, the year we imported our stock from France.

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**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

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**FORTHOROUGHbred FOWLS** in small lots, address Cottonwood Farm, Pleasant Grove, Cal.

**MEAT MEAL.** Best quality. Lowest price. A. Warren Robinson, Napa, Cal.

**BRONZE TURKEYS.** Ed. Hart, Clements, Cal.

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**50 HEAD CHOICE POLAND-CHINA HOGS** from recorded breeders. Boars 6 to 10 months old; fit to head any herd. P. H. Murphy, Perkins, Cal.

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Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams.

Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.

## ORDERS ARE COMING IN

for spring pigs. We have shipped a few and have orders entered for others to be shipped when old enough. We sold two of the three hogs advertised the past few weeks and now offer the remaining Poland-China sow farrowed June 25, 1900, sired by Missouri's Best U. S. 46355 and out of Happy Queen 134192 sired by the great \$4000.00 boar Happy Union 41111. Write us for particulars.

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FOR POULTRY.

Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are high. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

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## Red Polled Cattle.

Color Deep Red. Both Sexes for Sale.

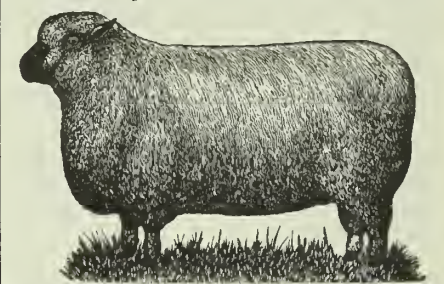
Address all communications PETALUMA, SONOMA CO., CAL.



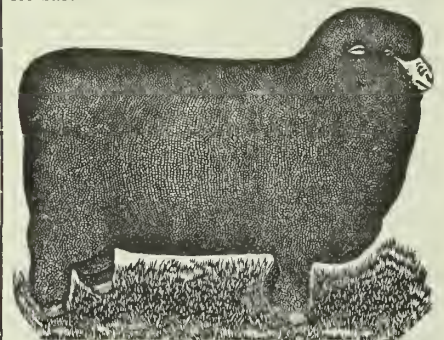
**FRANK A. MECHAM.**

Importer and Breeder of Shropshire Sheep.

They were all imported from England, or bred direct from imported stock.



We have also bred American Merinos—Hornless Sheep—for 30 years. They are a large sheep, without wrinkles. Rams will produce 20 to 25 pounds of long, white wool yearly. Sheep of both sexes for sale.



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**THE WEEKLY AMERICAN BEE JOURNAL**  
Tells all about it.  
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118 Michigan St., Chicago, Ill.





## SHEEP AND WOOL.

### How the Turks Handle Mohair.

Dr. W. C. Bailey of San Jose gives the American Sheep Breeder an outline of his observations in Turkey as to handling mohair, which will be interesting to California goat breeders:

**SHEARING.**—The Angora goat district of Asia Minor is subject to much variation in climatic conditions during a year, and to extreme changes, especially during the spring and fall, within a very few hours. The stock men have learned this fact by sad experience. A recently shorn goat won't live long in a storm with the thermometer below zero, without some protection. A doe, heavy with kid, may survive, but she is very likely to have the kid prematurely.

Building warm sheds for such emergencies is beyond the Turk. He builds a shed for himself and all spare room in this shed is used for the stock, but to build a special shed large enough for 1000 goats would probably cause the Sultan to levy a special tax on the offender. But there are other points besides the weather which the goat man must consider at shearing time. If the fleece is allowed to remain too long on the animal the warm weather causes the goat to shed his mohair. Before the shedding commences the mohair loses its luster and becomes dry, brittle and harsh. This fact necessitates shearing at a proper time. Usually the month of May is most favorable for shearing around Angora. The practice of clipping twice a year is unknown in Turkey.

When shearing time arrives the goat men combine forces. Several neighbors help to shear a flock and when one flock is finished they start another. The average number of goats shorn by one man in a day is thirty. First the feet of the goat are securely tied. The Turk then smokes a cigarette. After due rest he commences, with a pair of crude iron scissors, which he operates with both hands, the hands being placed at opposite ends of the scissors, to shear the goat. It is a slow process, but the Turk is in no hurry. Some of the mohair merchants of Constantinople thought to do the Turk a favor by introducing the ordinary spring sheep shears. The shearer found these shears made his hand tired, so most of the men prefer the old scissors. Not content with shearing the live goat, the Turk busies himself by cutting the mohair off of skins while gossiping in the coffee house during the winter. Comparatively few of the skins are sold with the mohair on them.

**PACKING HAIR.**—After the goat is shorn the fleece is carefully skirted, all of the inferior parts and tag locks being separated from the best mohair. It is then packed in bags. The individual fleeces are never tied. They are kept separate and are known as "bumps" in the Bradford market. Formerly these bags, averaging about 180 pounds of mohair, were made of the hair of the common goat, but now the Constantinople merchants send jute bags into the interior. Mohair is considered a good investment by the Turks. If a man has surplus coin he buys mohair and stores it in his shop or house. There are many robbers in the country and it is not safe to keep much money or valuables around the house. The robbers cannot afford to carry away mohair and, although the price of the mohair may fluctuate some, the Turk can always get cash on delivery for it. This is one reason why the exportation from Asia Minor varies. If the foreign price is high, much of this stored mohair comes to the market, while if it is low more mohair is stored.

**MARKETING.**—Many small merchants—Armenians, Greeks and Turks, usually—with a pack burro or two visit the Angora farmers and bargain with them for a part or all of the year's clip. The farmer knows nothing of the happenings in the outside world. He cannot read or write, and even if he could read few newspapers reach the interior and none quote mohair markets. The farmer estimates the value of his mo-

hair from former prices and local gossip, which has probably been circulated knowingly. The little merchant brings his purchases to a nearby town. If he wishes to return to the country and buy more, he sells the lot to some of the local merchants. These local merchants are largely Greeks and Armenians. However, anyone who has money will deal in mohair. The Constantinople merchants (mostly English) have commission agents—Greeks and Armenians in the larger towns along the railroad.

The town merchants sort the mohair again. They keep the bags from different districts separate, select the finest qualities, get out the colored fleeces and wash some of the mahair if it be dirty or greasy.

Formerly all of the mohair had to be forwarded in caravans on camels or burros to the sea coast. To-day the mohair is brought from interior towns to the railroad by caravans, and then it is usually sent by rail to Ismidt, on the Sea of Marmora, or Constantinople.

On arrival at Constantinople—most of the clip comes to the capital—it is loaded onto the backs of men and carried to the mohair merchants' quarters. The Government will not allow the merchants to use teams, as it would throw a great many "hamels" out of employment.

**FOR THE ENGLISH MARKET.**—Each Constantinople merchant has his Bradford correspondent. While he is waiting for orders from Bradford, England, he again sorts and then stores the mohair. There is a large public sorting room in Constantinople and around this room are many private store rooms. There is a regular force of men at work here, grading the mohair. Some of the interior hair contains red kemp, some gray kemp, some much short white kemp, some long white kemp, and each lot is separated. Some of the hair is oily, some is harsh and refractory in spinning, and some needs a second washing. The mohair is graded according to fineness, and the Bradford men can order certain grades, as XX or XXX or No. 1, 2 or 3, and they know just what that grade will work into. The English mills, however, do not buy the mohair direct from Constantinople. It is shipped to a dealer or correspondent in Bradford and there it is offered to the mill men.

The mohair is spun in England, but large quantities of the spun yarn is exported to Germany and France to be manufactured. Some have claimed that it required certain climatic conditions, etc., to spin mohair, but the American mills have demonstrated that with proper machinery mohair can be spun anywhere. The French, seeing what America has done, are arranging to spin their own yarns. If France does this, Germany won't be long in meeting competition.

The American Angora raiser has yet a large unsupplied home demand for his mohair. The increase in the number of mills working on this material and the generalization of the market for mohair, however, will stimulate the demand for raw product.

### Of Special Merit.

Finer than any candy are the crystallized or glace fruits so daintily and carefully prepared by the H. B. Monteith process. Every variety of fruit thus preserves its individual flavor and as so prepared tempts the appetite. Full instructions as to the process can be secured from the inventor. A fine one-pound box of these assorted crystallized California fruits will be sent to any address by Mrs. H. B. Monteith, Santa Cruz, California, on receipt of 50 cents.

### Deafness Cannot Be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces. We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free. F. J. CLENEY & CO., Toledo, O. Sold by Druggists, 75c. Hall's Family Pills are the best.



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All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of

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The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes. Made by STANDARD OIL CO.

# The Greatest Sale of the Year!

WILL TAKE PLACE AT

AGRICULTURAL PARK, SACRAMENTO,  
FRIDAY, SEPT. 13th, 1901.

## 24 Palo Alto Brood Mares

—: ALL IN FOAL TO :—

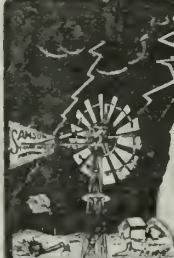
MENDOCINO 2:19½, MONBELLS (son of Mendocino and Beautiful Bells), NAZOTE (brother to Azote 2:04½), AZMOOR 2:20½, ALTIVO 2:18½ (brother to Palo Alto 2:08½), EXIONEER (son of Boodle 2:12½ and Expressive 2:12½).

—: INCLUDING SUCH MARES AS :—

ALDEANA 2:25, EMALINE 2:27½ (dam of Sportly 2:29½), MEMENTO 2:25½, LINNET 2:29½ (sister to Whips 2:27½, sire of Azote 2:04½ and Cobwebs 2:12), JESSIE M. (sister to Idlemay 2:27½ and Wildmay 2:30), MISS NAUDE 2:29½ (dam of Nordeau 2:17½), NINA (dam of Ariel 2:27½), NORDICA 2:19½, TILLIE D. (half sister to Truman 2:12), CONSALATRICE (half sister to Utility), LIZZIE (dam of Ah There 2:18½, Lent 2:26 and Liska 2:28½), CECIL (dam of Electric Coin 2:18½, Cecilian 2:22, and grandam of Paceta 2:26), AHWAGA (dam of Azmon 2:13½), ATALANTA (dam of Othello 2:28 and Atalanta Wilkes (2:29½), MELROSE by Sultan, and a number of choicely bred three, four and five-year-old mares by Dexter Prince, Advertiser, Azmoor, etc.

This is without doubt the greatest opportunity for our California farmers to get grand-looking, standard trotting Mares in foal to the greatest young sires in this State. No reserve.

WM. G. LAYNG, Live Stock Auctioneer.



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better than any wind mill ever invented. This is not only true because of the unusually well constructed and thoroughly trussed and braced angle steel tower, but because of the great strength of the mill itself. It has a way of adapting itself to severe shifting winds.

### The Samson Wind Mill

because of its many points of superiority, sprung into popular favor immediately upon its introduction, and is now the recognized leader among machinery of this class. The powerful Double Gear with center line draft, long interchangeable boxes, freedom from all torsion and overhanging strain, make it the strongest in the world. Don't buy until you investigate this mill. Samson Art Catalog free.

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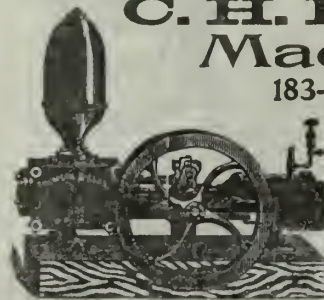
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Where, with Enlarged and Increased Facilities, they are better than ever prepared to do

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Promptly, and at Reasonable Prices, and will continue the manufacture of

**Thomson & Evans Steam Pumps,**

Deep Well Pumps, Power Pumps, Etc.,  
Also Marine Engines, Ship and Steamboat Work,  
Pipe Cutting, General Jobbing and Repairing.

# PATENTS

Obtained in all civilized countries. Expense saved inventors by preliminary searches. Communications confidential. Inventors' guide free on request. DEWEY, STRONG & CO. (Established 1860), 330 Market Street, San Francisco, Cal., and 918 F Street, Washington, D. C.



### The California Roadrunner.

All of us are probably more or less acquainted with this bird, common as it is to every mesa and foothill region of southwestern United States. Strange as it may seem, the roadrunner belongs to the cuckoo family, but we must not confuse him with the famous cuckoo of England nor yet the rare California cuckoo, found in our lowlands, says Harry Dunn, an interesting writer on ornithological subjects and particularly so in regard to the birds of southern California. To see the roadrunner and the cuckoo before us, side by side, we would never dream them to be near relations, but ornithologists and students of comparative anatomy, generally, all unite in placing them in the same family. Next time you see a roadrunner close at hand—and you need not shoot him to do so—just note how much he resembles one of those long-tailed oriental pheasants, so many of which have been imported to our shores during the past year.

Contrary to the pheasant, however, the roadrunner's powers of flight are very limited, so slight, in fact, that almost always he has to have a "running start," as the boys say, before he can rise into the air. You will notice, too, that this bird has his toes in pairs, two behind and two in front, whence he is called zagodactyl, or cross-toed. The woodpeckers all have feet formed after this fashion, so that they may the better cling to the vertical trunks and branches of the trees, but why they were given to a bird of such terrestrial habits as this swift-footed wanderer of ours, does not appear.

The Spanish-American call the roadrunner churea and also pisano, while in New Mexico and along the southeastern border of our State he is called chaparral cock about as often as roadrunner.

The female of this species begins to build her nest about the middle of March and is assisted in its construction by her mate. This is a saucer-shaped structure sometimes more than a foot in diameter and 3 or 4 inches thick. The actual "hollow" or depression in the nest is usually so shallow that the slightest jar will send the eggs over the edge. These eggs are from two to eight in number and of a dull white color. The size is about that of the domestic pigeon and they are laid at varying intervals, so that often a single nest contains eggs in all stages of incubation, from fresh to hatching, as well as young birds. This curious habit is also peculiar to the other members of the cuckoo family found in the United States; but they are all arboreal birds and lay fewer eggs than does their pheasant-like relation.

The roadrunner, if caught when young and carefully trained, makes an exceedingly interesting pet, though his pilfering insects are as finely developed as those of any crow. He is said to have a habit of robbing hens' nests; but, while I know nothing of this, I do know that he never robs the nests of other birds, so doubt this story. As with many other birds, the appearance of both sexes of the roadrunner are alike, save that the male is slightly larger than the female. This distinction, however, does not appear unless the birds are close at hand, as their colors and markings are exactly the same.

### A Notable Stock Sale.

In September, 1893, at Sacramento, the Palo Alto Stock Farm held a sale of brood mares, colts and fillies. Among the brood mares was the now celebrated producer Dolly by Electioneer, dam Lady Dooley by McCracken's Black Hawk. Her breeding and good qualities, forcibly and ably represented by the catalogue and auctioneer, failed to find a purchaser who was willing to pay over \$200 for her. This mare, like many other well-bred mares at Palo Alto, failed to find the nick suitable to her until after she had been sold. Dolly is the dam of Dolly Dillon 2:07, winner at Providence recently in 2:09½, 2:07, 2:08. She is also the dam of Dolly 2:15. At Sacramento, September 13th, Palo Alto Stock Farm will sell twenty-four brood mares, and it is not unlikely that many of these mares will prove producers of extreme speed.

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING AUGUST 20, 1901.  
681,085.—SOLAR OVEN—M. M. Baker, S. F.  
680,833.—WATER MOTOR—Banning & Carey, Los Angeles, Cal.  
680,762.—CAN FILLING MACHINE—F. E. Caton, San Jose, Cal.  
680,816.—FLOW—W. M. Downen, St. John, Cal.  
680,914.—BRICK KILN—Gray, Gray & South, S. F.  
681,169.—FRUIT PICKER'S SACK—A. Hamilton, Alhambra, Cal.  
680,859.—CLAMP—Hassler & Watters, Oakland, Cal.  
680,917.—COVER FOR KETTLES, ETC.—C. H. S. Helling, Alameda, Cal.  
680,918.—TRACTION ENGINE—J. E. Henris, Saratoga, Cal.  
680,919.—TROLLEY GUIDE—Geo. F. Heusner, Portland, Or.  
680,925.—CAN HOLDER—J. F. Kieley, San Jose, Cal.  
680,720.—SIGN—L. R. LeLande, Los Angeles, Cal.  
681,069.—LOOMS—J. H. Northrop, Tustin, Cal.  
680,938.—CONCENTRATOR—A. B. Paul, S. F.  
680,886.—WHEEL SCRAPER—C. Rath, Los Angeles, Cal.  
681,145.—HAY FORK—F. M. Stardley, La Grande, Or.  
680,947.—PHOTO MOUNTS—P. J. Stuparich, S. F.  
680,910.—FRICTION CLUTCH—E. Turney, Portland, Or.  
680,822.—LOGGING HOOK—A. Wren, Seattle, Wash.  
681,088.—CLASP—Watt & White, Pendleton, Or.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

SACK HOLDER—No. 680,381. Aug. 13, 1901. W. M. Inman, Randshurg, Cal., and C. C. Inman, Bishop, Cal. This is a device for holding the mouths of sacks open for the purpose of filling. It consists of standards, and a base to which they are fixed, means for adjusting the standards vertically, an elastic extension to one of the standards, and both extensions having their upper ends curved and provided with transverse spreaders with sack-engaging hooks so that the latter may be attached and the sack held open until properly filled.

COVER FOR POTS AND KETTLES.—No. 680,917 Aug. 20, 1901. C. H. S. Helling, Alameda, Cal. This invention is designed to provide a cover for culinary utensils, which cover has projecting lugs or hooks to engage the edge of the pot, and a lever pivoted eccentrically of said cover with its outer end provided with a projecting lug or hook adapted to engage the edge upon the opposite side whereby the cover may be firmly locked upon the pot or disengaged therefrom. A segmental opening is formed upon one side between the hooks which allows the liquid to be poured off while the cover retains the solid contents.

### SOUTH AUSTRALIA.

#### Professor of Agriculture.

Applications will be received by the Government of South Australia, Adelaide, or by the State Agent, 1 Crosby Square, London, E. C. England, for the position of Government Professor of Agriculture. The duties of the office are:  
(1) To superintend the Agricultural College and Experimental Farm and teach classes thereat.  
(2) To advise the Government on all points relating to Agriculture.  
(3) To lecture to Agriculturists when required.  
The applicant must be competent to make analyses of soils and to conduct such scientific and practical experiments as the Government shall consider necessary.  
The salary will be £500 per annum with rations, house and fuel. The term of engagement is five years subject to satisfactory performance of duties. Applicants must be in good health and under 45 years of age. The passport of the successful applicant will be paid to South Australia, and his salary will commence on his arrival there.  
Further information may be obtained upon application to the Honorable the Minister of Agriculture, Adelaide, or to the State Agent for South Australia, 1 Crosby Square, London, E. C. England. Applications will be received up to the 1st November, 1901.

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We are the largest manufacturers of Steel Wheels and Truck Wagons in the World. Write for Catalogue. Havana (Ill.) Metal Wheel Co.

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"Greenbank" Pure 100% Caustic Potash and 98% Powd. Caustic Soda.

T. W. JACKSON & CO.,  
Sole Agents, - No. 123 California Street,  
SAN FRANCISCO, CAL.

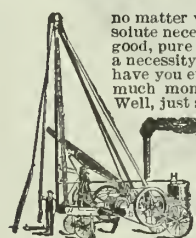
### "Farm Poultry."

The latest book on the poultry interest is entitled "Farm Poultry," written by Prof. G. C. Watson of the Pennsylvania Agricultural College and published by The Macmillan Co. as a volume of their Rural Science series. It is a very neat little book of 340 pages and aims to present in condensed form the most essential principles and methods in keeping fowls on a farm or by an amateur. It aims to be suggestive and to trust the reader to adopt his practice to the principles and leading facts advanced, and yet many explicit and valuable instructions are given. The broader view of the aims and methods of successful poultry keeping which Prof. Watson holds constantly in mind is a very important one to propagate. The book is fully illustrated and can be furnished through the PACIFIC RURAL PRESS for \$1.25, postpaid.

How the "Pacific Rural Press" is Pushed by Its Friends.

A subscriber in the interior valley sends a remittance and says: "I send you a new subscriber. He has been reading my paper until he has become attached to it and asked me to subscribe for him also when I renewed my subscription." We appreciate such friends—both old and new.

## To Build a Home,



no matter where located, the first absolute necessity is an ample supply of good, pure water. Water then being a necessity to both men and animals; have you ever stopped to consider how much money there is in that idea? Well, just stop long enough to figure on it for a moment, then send for a catalogue of our

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Drilling Machines.

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### CHOICE

## CITRUS TREES

FOR SEASON 1902.

Every horticulturist should have my 28-page illustrated catalogue, which tells all about citrus trees; the old sorts and the tested new sorts, also table for planting trees, sowing seed, etc. Your address on a postal will bring one. Address

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### SAN DIMAS NURSERIES,

San Dimas, California.

# California Fruits.

NEW EDITION (3rd). LARGELY REWRITTEN.

By PROF. E. J. WICKSON.

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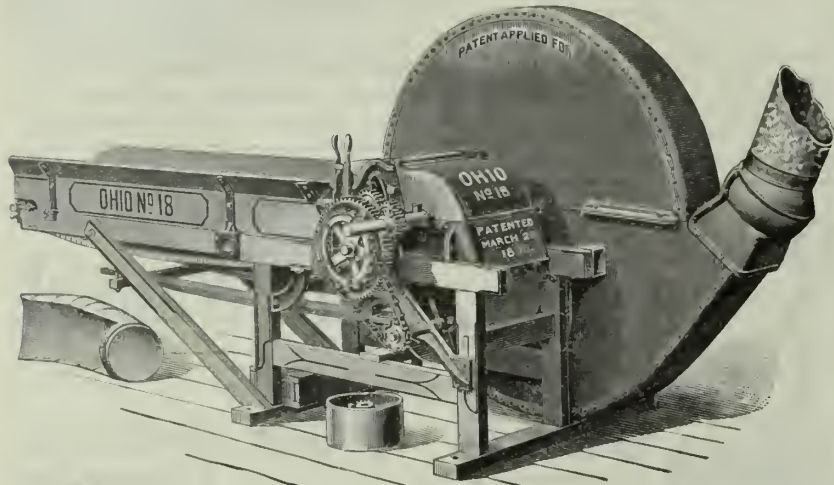
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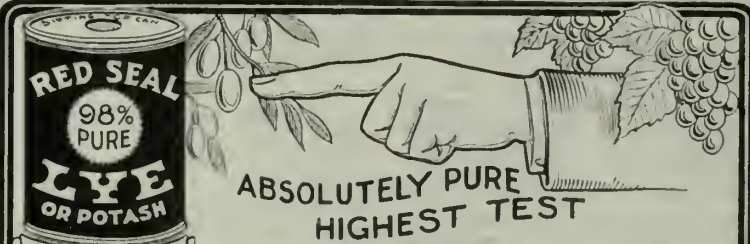
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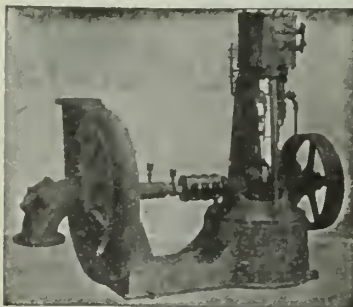
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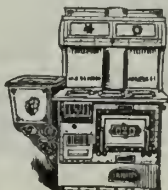
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## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 11.

SAN FRANCISCO, SATURDAY, SEPTEMBER 14, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### What Silage Will Do.

Two weeks ago we gave an account of the silos built for experimental purposes at the Oregon Experiment Station at Corvallis. The bulletin by Vice-Director Withycombe, to which we alluded, has also an interesting rescript of results attained by feeding silage. The two pictures presented herewith strikingly show what silage will do as a feed for farm stock. The first engraving represents a dry Shorthorn cow which from January 1 to May 1 was fed daily without grain forty pounds of clover silage and what mixed clover hay she would eat up clean. This cow not only retained her excellent condition on the above ration, but made a satisfactory gain in live weight. The other picture represents six Cotswold ewes which were taken off of rape and clover pasture December 1, 1900, and put on clover silage, mixed hay and a light ration of grain. This was fed until March 15, 1901, when they were photographed for the plate, which shows their satisfactory condition. These views involve hints that the silo is not alone for the dairyman, but has an important field of usefulness on the general farm. When one concedes such wide usefulness to the silo, the means of attaining it become doubly interesting. Dr. Withycombe includes in his publication a very wide range of observation and experiment along these lines.

Corn, from the ease with which it can be converted into silage, is perhaps entitled to stand at the head of all forage plants for this purpose. The solid stems, flat leaf and proper ratio between its liquid and solid constituents seem to favor it for this work. The plant, however, is comparatively poor in protein, hence the ration should be balanced with alfalfa hay or some other food to supply the lack of protein.

Alfalfa is also a good silage crop. This plant, under favorable conditions, will yield a crop representing, perhaps, a greater value per acre than any other forage crop grown. With the silo to preserve it in its succulency, this crop can be made of inestimable value to the dairying and stock growing industry, where it grows well. Other clovers also work well in the silo. The field pea makes a good silage crop. They can be grown under greatly varying conditions, are rich in protein, but stock do not

relish them quite so well as clover and alfalfa.

Some unsatisfactory results have followed attempts to silo peas and vetch when grown with grain. While the grain will materially aid in holding the vetch and peas up, thus facilitating the harvesting of the crop, too large a proportion of grain is undesirable when the crop is to be siloed. The hollow stems of the grain carry more or less air into the silo, which is thought to accelerate fermentation and consequent deterioration of the silage. The best forage plants for silage are generally those with solid stems, and which carry over 20% of solid matter in their physical structure. Very succulent plants, such as cabbage, rape and immature corn, clover, alfalfa or

vetch, when carrying much less than 20% of solid matter, are unsuited for silage. In recent experiments conducted at the Oregon Station with siloed immature clover, containing 79.14% of moisture, it was found that a great quantity of its liquid constituents oozed out at the bottom of the silo. An analysis of this exudate showed that it contained 1.13% protein. This is not large, but nevertheless represents a loss of valuable nutrients.

Recorded results of a large number of experiments with silage warrant the conclusion that plants are in the best condition for silage when they are fairly well matured. Corn is seemingly in the best condition for the silo when the kernels are nicely glazed, just after the roasting ear stage. In some seasons corn suffers injury from autumn frosts. As a result of this injury it becomes shriveled and dry, and the farmer usually concludes that it is not available for the silo. Frosted corn will make fair silage if the precaution is taken when putting it into the silo to add sufficient water to bring the moisture content up to what it would be under normal conditions.

Clover is in the best condition for the silo when it reaches the proper stage for hay—that is, when it is slightly beyond full bloom and the first heads begin to discolor. It should be put into the silo as soon as possible after cutting. To permit it to wilt very much will seriously interfere with its packing in the silo, unless water is added. It is quite probable that the reported failures with clover silage are largely due to the material not becoming sufficiently compact in the silo to exclude the air. This, in a measure, may be due to unnecessary wilting of the fodder before putting it into the silo.

Alfalfa is harvested for silage when in full bloom. Although failures have been reported with alfalfa as silage, there are, however, a great number of dairymen who have been eminently successful in siloing this crop. Peas are ready for the silo when over 50% of the pods are slightly advanced beyond the "green pea" stage. Several tons were put into one of the Oregon Station silos last season at the stage of ripeness mentioned, and came out in excellent condition.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, September 14, 1901.

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## The Week.

The overshadowing event of the week is the dastardly attempt upon the life of the President of the United States. While attending the great Pan-American Exposition and rejoicing with the people over success of their various industries and while mingling with the people upon the equal terms of fraternal citizenship which no other sovereign ruler in the world can do, one Leon Czolgosz, a renegade Pole and anarchist, fired two bullets into the body of the President. Fortunately the balls avoided vital spots, and unless secondary effects ensue the wounds will not prove fatal. Public execration of the deed is giving way to national rejoicings that the assassin was foiled in his purpose, and yet that purpose arouses the most profound indignation and denunciation from every word and pen. Words fail utterly to characterize it. It is able to rest upon no film of extenuation. The country is at peace; it is a time of unusual prosperity; no suggestion of passion can be connected with the deed. It can claim no authorization or excuse except such as may lie in the dark fallacies of anarchism, and anarchism in any form in the United States is simply suicide. No wonder that thousands of the countrymen of this wretched assassin are holding public meetings and repudiating his deed. They see that a stroke at the life of the popularly chosen ruler of the American people is a thrust at the heart of the American people, and they naturally cry shame upon the deed and detestation upon the perpetrator.

There is something strikingly Judas-like in this attempt upon the life of the President. Approaching him in the guise of friendship, grasping his hand as the American citizen delights to do in expressing his good will and respect for the man whom the popular vote has honored, this unspeakable wretch traitorously greets with one hand and murderously shoots with the other. Even in its method the deed is abominable beyond description. The whole country is dumb with horror and execration, for those who have attempted to express their denunciation confess that no words within their command are adequate. No doubt the event will prove valuable to awakening the public mind to the imminence of dangers which have been thus far but dimly described, and it is a matter for thanksgiving that, in the wisdom of God, the destruction of a life which the American people admire and delight in, was unnecessary to enforce the lessons which it now seems the American urgently needs. There must be greater attention paid to the exclusion of the devilish prod-

ucts of old world absolutism and oppression. These outlaws have no conception of liberty; they make a god of license. Their principles and views are utterly abhorrent to American ideas and directly destructive to our liberties. The American people has great power of assimilation. It can adjust and reform and transform many philosophies and recreate those who bring them to the light and warmth of our system of public discussion. Some of them may even be contributions to our national strength and truth. There is, however, one manifestation of Satan which even the American genius cannot surmount, and that is anarchy. From a national point of view it is the unpardonable sin. Hideous as it is everywhere, it becomes here absolutely intolerable. It should be stamped out and the country should be protected from further importations of it. We should no longer receive immigrants without the closest inquiry into their antecedents. It is not enough to exclude paupers; there are immigrants a thousand times worse than paupers. They enter the country as emissaries of European murderers' societies; they propagate evil among our weak and wicked people who might never rise beyond ordinary measures of control without them. Let Congress provide better protection against immigration which is a menace to public safety and to the perpetuity of our institutions. If the sufferings of the President as he lies upon his bed of pain shall awake the American people to the need of such provisions he will not have suffered in vain. The nation will love him and honor him the more for this new service.

But while we are studying the prevention of new accessions to our ranks of evil doers, it is also important to have constant care to reduce the agencies which are constantly arousing the worst passions, and exciting to deeds of violence, among our own people. Our conscienceless newspapers should fail of patronage; our blatant demagogues who are stirring up strife in our industries and commerce to promote political ends or to derive a livelihood by walking and talking; our lecture-room sophists who excite their hearers to discontent and self-destruction—all these and kindred evils should be repressed by the coldness of aversion. They all thrive because the public as individuals patronize and tolerate them. A truer public sentiment will cause them all to perish of neglect. In this direction each one has a duty to perform.

This week has seen another anniversary of the birth of the State. We are entering well upon our second half century. During the last year notable advances have been made in population, in increase of property and in export trade. There are many indications, too, that we are just at the beginning of advancement and development greater than anything which has been experienced hitherto. It is pleasant to contemplate and will be a delightful fulfillment of the prophecies of the pioneers.

While wheat market is far from being satisfactory, and quotable prices are unimproved, the cloud which has been overhanging us locally is beginning to show a silver lining. The wheat is beginning to move. A full cargo and a part cargo were cleared for Europe one day this week, a noteworthy event these slow times. Barley shipments are heavier than wheat. Two cargoes aggregating 5800 tons were sent afloat for Europe, and some minor quantities were forwarded by steamer and rail to the East. Barley values are steady. Oats are inquired for on Government account, causing holders to have confidence in the future. Corn is too scarce to admit of any wholesale trading. New beans are arriving, but not in heavy quantity; new Bayos are the latest, and are bringing close to the figures lately current on the old. Millstuffs are no lower and not likely to be cheap very soon. Hay is moving a little more freely but at no better prices. Beef is without a particle of change. Mutton is slightly firmer, and hogs are inclining downward, a further drop of 1c being predicted for coming week. Butter prices are again shaded and for other than most select the market is weak at decline. Cheese values are being well maintained, there being no heavy offerings and no special selling pressure. Fresh eggs of high grade are light stock and higher. Cold storage eggs are plentiful; consumers content with these need not go egg hungry for months to come. Poultry sold at a rather wide

range of prices, being firm for extra large and choice stock and weak for common. Potatoes other than fancy are lower, the cut having been necessary to keep shipping orders from going to other sections. Onion market shows a lull, with prices easier. Fresh deciduous fruits of high grade are in the main selling to fair advantage. Values for citrus fruits remain at fully as low levels as last noted. Dried fruit market is showing steadiness with considerable outward movement; a Panama steamer took 300,000 pounds for New York, mostly prunes. New prunes are in request for the filling of early orders, dealers bidding on basis of 3@3½c. for the four sizes. Raisin market continues bare. Wool is in good request at current figures; a shipment of 127,000 pounds went forward by steamer for New York, the same boat taking 25,000 pounds hops—the first noteworthy shipment of latter for the new season. Buyers and growers of hops still differ widely in their ideas of values.

Sometimes we get chestnuts in the form of corn. It may keep some of the newer comers to California from getting unduly excited if we indulge in a little reminiscence. The secretary of the Santa Ana Chamber of Commerce has received from the Pan-American Exposition at Buffalo grains of corn of a variety known as "cuzco." He is informed that the corn grows very large; that in the East it produces 18-inch ears on 20-foot stalks. They expect to have the samples planted in the peat lands in Orange county to produce some samples for the California exhibit at St. Louis in 1903. They also expect this corn to produce 3-foot ears on 40-foot stalks in the peat land, and he thinks this will beat anything else that will show up at the St. Louis Exposition. Now, this is all very charming. The only trouble with it that we can think of is that this cuzco corn was brought to California twenty-five years ago, was quite widely distributed for trial, brought nothing worth mentioning, and has never been grown since to any extent, though repeatedly heralded as a great new thing.

There is not much satisfaction in the announcement that the mysterious grape disease, also called the Anaheim, has turned up again in southern California. Several vines were brought in to Los Angeles from Glendale by the owner of a large vineyard there, who found his grapes infected with a blight to him unknown. After examining the samples Commissioner Robinson and Secretary Jeffrey pronounced the infection to be the Anaheim disease. This is the disease which in the past has caused universal damage in southern California to the extent of millions of dollars. It is deadly in its effect on a vineyard, and there appears to be no remedy against it. It has been the subject of study by eminent authorities, who have been unable to devise means of combatting the disease. In recent years there has been very little evidence of the Anaheim disease, and this is the first case in Glendale. It is the opinion of Secretary Jeffrey that the dry years have weakened the vines until they succumbed to the disease, which has never been fully absent from the county.

## QUERIES AND REPLIES.

### Sandy, Leachy Soil.

TO THE EDITOR:—Can you recommend any pasture or forage plant or grass which will amount to anything on sandy ground only 2 or 3 feet deep, overlying gravel? I have a piece of land of some four or five acres of such character on which I have been unable to raise any satisfactory crop. It lies along the Sacramento river and the surface of the land is some 6 or 8 feet above low water. If there is no pasture grass that would do well on it, would melons or garden do well?—McCoy Fitzgerald, Redding.

You need a deep-rooting plant to make its way through the gravel far enough to avail itself of permanent moisture. White sweet clover (*Melilotus alba*) will do well in such a place, but the plant is not usually acceptable to stock, though it would make good bee pasturage. Alfalfa would do also if you are not subject to long submergence during high water. Shallow-rooting plants, like melons and most garden truck, would fail because of lack of moisture in summer, as the water is cut off from capillary rise by the gravel. Even with irrigation such plants would fail because of the too free escape of the water through the gravel. Whether it would be satisfac-



tory to alfalfa depends not only upon the winter rise of water, but the thickness of the gravel stratum and the moisture present during the summer. If the land is not submerged, the best that can be done with it, probably, is to get whatever winter feed you can from fall sowing of barley or rye, to make its growth upon current winter moisture. We suppose, of course, that what you call sandy soil is not clear sand, which might be too deficient in plant food to give a good growth of anything.

Red Top or Rye Grass.

TO THE EDITOR:—I am growing some rye grass, but have some land that is a little low for rye grass (in the river bottom). I want to know if the red top would stand more water? I sowed the rye grass last April and it made a heavy growth, but seems to be on a stand-still now. Could you tell whether I have the annual or the perennial if I would send you some of the seed or the grass? As I started to say I wrote you but have not received an answer. Can you name other pasture grasses that are good for swampy ground?—READER, Stanislaus county.

Red top has been tried to some extent in California and has been proved by growers in some portions of the upper coast region, also at some interior points along rivers where moisture was ample. Rye grass has, however, proved incomparably better than red top. We are not sure that comparative tests of the endurance of the two to overflow has been made, but rye grass has survived very long submergence on the low lands near Stockton. If you send a few heads of the rye grass which you are growing we will have it determined for you. We do not know any grass that is better than rye grass for wet places, though there are some grasses, either native or old chance introductions, which are worth wider distribution. We do not mention them because we are not aware that seed can be had.

Winter Forage Plants for the San Joaquin.

TO THE EDITOR:—I have been trying some forage plants, including penicillaria, teosinte, rape and different kinds of fodder, corn and spelts. I planted in May and I now know that that is not the proper time to plant rape and spelts. I think rape would be a good winter forage plant for hogs as cabbage, to which it seems closely related, is not seriously injured here by the winter cold. Do you think my opinion warranted?—RANCHER, Merced.

The statement of your experience with forage plants is very interesting. The teosinte is a tender plant and has to be sown at the same time when it is safe to plant corn. Spelts and rape are hardy and should have been planted early in the rainy season, say in the fall, as soon as you are reasonably sure of moisture enough to keep them growing. There is every reason to think that rape will make a very satisfactory winter growth in your valley and be valuable for the purpose you mention. We are aware that some of our readers in the valley have experimented with it and we would like to hear from them of its winter growth and acceptability to stock. Field peas and oats sown together make good winter pasturage, or to cut and carry to stock. Rye also makes good winter feed. If you can work in a legume like field peas or the hairy vetch you will get a much richer food than you can get from rape or any of the hardy cereals grown by itself.

Cider Making.

TO THE EDITOR:—Will you kindly inform me the best way to make sweet apple cider. I have a large crop of apples which are so small they can't be sold so have concluded to try my luck in drinking material. Also would like to know the process of making hard cider?—READER, Angwin, Napa.

If you think of operating on a large scale you must visit older establishments and learn all you can about the best power grinders, presses, filters, etc. Such work requires an outfit something like that of a wine cellar and must be run not only for cider but fermenting into vinegar. It is not safe to undertake any of this without securing thorough acquaintance with the problems involved. For a small amount of cider, buy one of the combined grinders and presses which you can obtain from any of our leading dealers in agricultural machinery, and with these machines will come pamphlets which will furnish suggestions enough to begin with. The Keystone cider mills have long been favorably known. As for hard cider there is no trouble about getting it hard: it takes a whole lot of trouble to keep it soft. If you keep the cider in a

cool place it will be very slow in going to vinegar and remain hard enough to satisfy even a New England deacon.

Macaroni Wheat in California.

TO THE EDITOR:—Will you advise me regarding the adaptability of macaroni wheat to the Panoche plains, Fresno county, also the price, variety and where to be found? I have a circular of the Division of Vegetable Physiology by Mark Alfred Carleton, and I am interested in knowing whether this wheat would grow there or not. From 160 acres not irrigated I got 623 sacks of Sonora wheat; from 160 acres irrigated once with flood water from the hills I got 855 sacks this season.—READER.

There is little inducement to undertake growth of macaroni wheat in the interior parts of California. An essential character of the macaroni varieties is their large percentage of gluten, which gives hardness and dark color to the kernel. These characteristics disappear rapidly under California conditions, and seed which you might introduce in expectation of getting grain suitable for macaroni would produce the first season a mottled appearance, and after that the grain would become whiter each year until it reached the characteristic California type, which is a light-colored, soft grain, excellent for mixing with darker, harder wheats for milling purposes, but not suitable for macaroni making. Inasmuch as there is almost a certainty of departing from the type acceptable to macaroni makers, it does not seem desirable to undertake that particular line of production here.

What you say about irrigation of wheat is very interesting. If it should be convenient at any time, we would like to have an estimate of the cost of the irrigation as compared with the value of the added product.

Handling Young Trees From New Zealand.

TO THE EDITOR:—I am expecting to receive from New Zealand by steamer, due to arrive at San Francisco September 23, a lot of resistant apple roots. These are roots on which have been grafted the Northern Spy, and have been grown for one season; must be about the size of a lead pencil. These are just now ending their dormant period, and are coming into a new environment, where our deciduous trees are just passing into the dormant period. What will be the effect on these trees? How should I treat them? Should I plant in nursery now and encourage a short growth, let them be checked by frost, and take the same course as other plants, or should they be planted in sand and put in a dark place—cellar or other place—where they would not be exposed to much light, etc.?—RESISTANT, San Francisco.

The little trees could be kept dormant indefinitely if you had control of temperature and moisture conditions, but that would require well-regulated cold storage arrangements. A California cellar in the fall of the year will not keep trees dormant. The best way to handle the trees is to wet down a piece of well-drained soil in a place where early frosts are not likely to occur, and plant out the trees so that they make a short season's growth. December or January temperatures will slow them down, and after they drop their leaves graft in the nursery row and plant in orchard next year.

Ridding a House of Fleas.

TO THE EDITOR:—I have just located in an old house that has been idle for eight years and am overrun with fleas. Can you advise me as to the best means to get rid of them?—D. R. H., Skaggs Springs.

A perfect job can be done in a tightly-closed house by the hydrocyanic acid gas method described in full detail in the PACIFIC RURAL PRESS of June 9, 1900. A less perfect but often very satisfactory method is thorough fumigation by burning sulphur. Burn a handful of sulphur in an iron pot in each room, keeping doors and windows closed. This should destroy all creeping things. It may bleach things a little, but not usually enough to be objectionable.

Melon Syrup.

TO THE EDITOR:—Please let me know if there exists in California, or anywhere in the United States, factories producing watermelon syrup.—SUBSCRIBER.

There are none in California and, so far as we know, none in the United States. The matter was vigorously advocated in the 70's, but no lasting results were attained. It has been agitated from time to time since that time. Cane sugar syrup, as a by-product of the refineries, is too cheap to warrant

syrup making from either melons or sorghum. Considerable grape syrup was made at one time about a decade ago, but grapes are now too valuable for wine to think of syrup making.

Chicken Ticks Again.

TO THE EDITOR:—I send in this letter an insect that is devouring a flock of chickens in this neighborhood, and would like very much to know what it is. I send some of the eggs and some of the full grown bugs.—POULTRYMAN, Ventura county.

The insects are ticks which were discussed in these columns in our issue of August 24. These pests occur in nearly all parts of the State, and there is no hope of success with chickens unless they are resolutely fought and the chicks protected from their attacks.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending Sept. 11, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Nearly normal temperature has prevailed during the week, and conditions have been favorable for late deciduous fruits, grapes and fruit drying. Grape picking is progressing; most reports show that a light crop is probable, but the grapes are of excellent quality. Salway peaches are yielding nearly a full crop in Solano county, and large shipments are being made. Olives are of good size, but the yield is below average. Orange prospects continue good. Grain and hay harvests are practically completed. The greater part of the grain crop is piled up, uncovered, awaiting shipment, but is moving very slowly on account of labor troubles.

COAST AND BAY SECTIONS.

The weather has been quite favorable for late crops and fruit drying, except in some places along the coast, where fogs have prevailed. The correspondent at Healdsburg reports a heavy frost on the 8th, with minimum temperature at 30°; no serious damage resulted. Apples in Sonoma and Humboldt counties will yield a large crop, excellent in quality. Late peaches are abundant and of good quality. Grapes and citrus fruits are thrifty. Hop picking continues. Sugar beets and beans are doing well. Corn and vegetables are in good condition. Hay baling and grain thrashing are progressing as rapidly as possible, but shipments are very light, owing to continuance of labor troubles.

SAN JOAQUIN VALLEY.

The weather has continued clear and pleasant, with cool nights. Good progress has been made in fruit picking and drying. Grape picking is progressing rapidly; the yield is estimated considerably below the average, but the grapes are of superior quality. The principal shipments are the Tokay and the Black Prince; some early wine grapes are going to the wineries. Late deciduous fruits are ripening slowly, owing to the cool nights. Grain thrashing continues, and large quantities of wheat and barley are being stored in the warehouses. A good crop of sweet potatoes is being gathered. Alfalfa is looking well. Irrigation water is plentiful. Plowing and seeding have commenced in some places.

SOUTHERN CALIFORNIA.

The weather has been considerably cooler than during the preceding week, and somewhat unfavorable for raisin grapes and fruit drying. Fogs have been frequent along the coast. Grape picking is progressing in the foothill districts of San Diego county. All varieties of melons are at their prime and very plentiful. Walnuts in Orange county show considerable damage from blight. Irrigation water is becoming more plentiful. The tomato crop will be large. Barley has yielded a heavy crop, but mostly of poor quality. Wheat was a light crop, but the quality good.

EUREKA SUMMARY.—Weather conditions were generally favorable for the growth of vegetables and fruit. Rain would greatly improve pasturage. Apples continue very promising. Thrashing is progressing rapidly.

LOS ANGELES SUMMARY.—Cool days and foggy nights were favorable for all products, especially beans. Reports are good concerning citrus fruits; early dropping has stopped. Berries and vegetables are in good condition, and plentiful.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, September 11, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week.....	Minimum Temperature for the Week.....
Eureka.....	.00	.03	.67	.65	60	44
Red Bluff.....	.00	T	.19	.36	92	54
Sacramento.....	.00	T	.14	.14	94	52
San Francisco.....	.00	T	.14	.14	70	50
Fresno.....	.03	T	.16	.16	94	50
Independence.....	.00	.33	.77	.15	84	50
San Luis Obispo.....	.00	.18	T	.16	84	44
Los Angeles.....	.00	.08	T	.08	78	48
San Diego.....	.00	T	.09	.09	78	60
Yuma.....	.00	.22	.02	.59	100	62



## HORTICULTURE.

### California Fruits at the Pan-American.

California is doing a good thing in the eyes of the world at Buffalo this summer. C. E. Lloyd writes to the New York Fruit Trade Journal an account which



we like to see published in such a journal, and it will be gratifying to our own readers to see what is printed about us at a distance.

**MR. BURBANK'S DISPLAYS.**—Mr. Luther Burbank of Santa Rosa has kept the California exhibit at the Pan-American Exposition supplied for the last few weeks with fresh installments of some of his latest creations in the fruit line. As is known to the fruit world, Mr. Burbank devotes his life to the work of creating new varieties of fruits, vegetables and flowers, and every year presents something new to the fruit growers which proves to be of great value to this important industry. One of the new varieties presented to the public this year for the first time is a stoneless prune. This attracted more attention from the fruit men who visited the Pan-American Exposition than probably any one item that has been exhibited. Its flavor is all that could be desired, but it is rather under size. In the opinion of orchardists it is thought this objection will be overcome by the fact that there will be no stone to detract from the weight or interfere with its use. Another variety is what he calls the Washington. It is a very large plum, beautifully colored on the surface and a blood red clear to the stone. Another is the Giant prune, and still another the Sugar prune, both of which have qualities which impress themselves on fruit men as likely to become valuable. However, these new fruits, like all other new things, can only be proven by experience. As in the case of some of his other popular varieties, it would be found, no doubt, that some of these fruits would be well adapted to certain localities, while they may prove failures in others. It is very rarely that a fruit is found such as Burbank's famous Wyans (?) plum, which has proved profitable in all sections of the country. Another of his new creations which have been exhibited at the Pan-American Exposition is what is called the Plumcot, a cross between a plum and an apricot. It has the size and shape of the apricot, but the color and texture of the plum, and a flavor which is distinctly its own, but which is regarded by connoisseurs as inimitable. Mr. Burbank has already made five or six shipments and promises two or three more installments of plums, and will later reinforce his display with samples of something new in the way of quinces, pears, apples and possibly something in the vegetable line.

**THE CALIFORNIA EXHIBIT.**—California's exhibit, which occupies about one-third of the space in the Horticultural Building, is admittedly one of the best and most artistically installed exhibits of State products on the grounds. It embraces a larger range of products than any other State or country. Its position is so conspicuous as to induce many visitors to the horticultural department to call it the California Building. Of course, fruits occupy the most conspicuous part of the exhibit. These include every variety known to the temperate and semi-tropic zones. No deciduous fruit can be asked for but samples of it can be shown, and of the citrus fruits, including the orange, any variety, the lemon, the lime, the pomelo and the citron.

The California exhibit in its entirety contains wine from eighteen of the most prominent sellers of the State. The woods of California are ingeniously worked in to form their offices and facades. Canned fruit and raisins constitute conspicuous features. In this exhibit is a large collection of very striking photographs of field and forestry, including pictures of the big tree growths and other forest scenes in California, one of which is 20 feet long. All of the fibers are represented, including ramie, flax, hemp, silk,

mohair, cotton and wool. They have jellies, marmalades, glazed fruit, and even pottery ware, leather goods, woollens and woolen goods and a very striking exhibit of ostrich feathers.

The Californians, with proverbial generosity, are now engaged in giving away quarter-pound samples of the famous Fresno seeded raisins. They are also maintaining a cooking booth for the purpose of demonstrating the high value and excellent qualities of the California prune when properly prepared. The prunes, prepared in different styles, are given to all comers with a beautifully prepared book which contains 100 recipes for cooking prunes and other California fruits. These free sample stands, added to the natural attractiveness of California's beautiful and diversified exhibit, make their space in the Horticultural Building one of the most popular places in the Exposition. California literature, treating of the resources, productions, characteristics and advantages of the State, is freely given to visitors, and a corps of competent gentlemen are on hand to answer any questions that may be asked regarding the best places for settlements or investments in California.

The State exhibit occupies the space extending entirely across the west half of the building, and is so arranged that the more ambitious sections, such as Los Angeles and Fresno counties, have their principal products grouped together, affording to visitors the opportunity of studying the possibilities of those prominent localities of the State, as well as the products of California in their entirety.

### Strawberry Growing in Southern California.

Elmo R. Meserve of Los Angeles gives the Cultivator an interesting letter on the methods of culture, varieties, etc., among the commercial growers of southern California:

**VARIETIES.**—The Dollar berry has been tried some but discarded. The best early berry either for home use or market is Lady Thompson—a sure cropper and a thrifty plant. This variety has been tested all over southern California and is usually satisfactory. It has a new rival in the great Eastern berry, Excelsior, a very fine fruit, rich color, a good bearer, berry very fine, splendid for preserves, as it is so rich and solid to very center. Plant is thrifty—withstanding draught, and I believe it has a good local future before it.

The Old Favorite Brandywine is the best all around berry ever introduced into southern California. It has more good points and fewer poor ones than any other variety yet proven. It does well in single hills or matted rows, and will last three or four years without renewing, if you desire extra large fruit in single hills.

Gandy, Jessie, Cumberland, Triumph, McKinley are all large foliage kinds and produce large, highly colored fruit, each variety having special points of merit.

Arizona is the best summer and fall variety, is an excellent family berry and in some sections—Covina, Redlands and San Diego—highly esteemed as a market berry.

Seaford, Sample, Murray's Extra, Early and Star have many admirers, and great things are expected of Sample. Star is a new name for the old well-known Sharpless. Next year I can report on Ridgeway, Parker Earle, Glen Mary, Warfield, Howell, Barton, Improved New Man, Michels and Gladstone.

All varieties given, with exception of Dollar, I have growing, and shall give each variety a thorough test for several years, as too many of our growers try a new variety and discard it if it does not prove satisfactory the first season. I believe it will be found that many varieties will improve after they are well acclimated. Commercial growers measure all varieties by the standard of Brandywine and there is no doubt up to the present time about its being the best berry for the commercial grower.

**PLANTS AND TIME FOR PLANTING.**—Plants should never be taken from old beds, but always from young, thrifty beds. The plants of most vigor and greatest productiveness are the ones taken from plants introduced from the East this spring—not fruited but grown for plant vigor only. Fruit production weakens the plant, and after bearing a long season's crop of fruit, the plant cannot produce as vigorous offspring as a plant used for plant production only. This is not theory, but a recognized fact, and many of the older varieties of berries, once of great merit but now run out, would yet be in their vigor if this method had been adopted. Do not purchase plants from your neighbor. A change of soils and a slight climatic change is good.

If you desire some winter fruit and a heavy spring crop, plant between August 10 and October 10. Plants set out during November, December and January will give you a medium spring crop, and a fair summer crop. If you plant later it is a good idea to allow your rows to matten and then take off a very heavy crop the following two years, some thinning will be found necessary.

Matted rows should be planted 3 feet apart, plants 1 foot apart in the row. For single hills, in open, porous soil not subject to baking, rows 20 inches

apart, plant 8 inches apart, but with soil somewhat compact and requiring frequent cultivation, 2½ feet by 1 foot.

Thoroughly plow your land, it is better to subsoil. Have your ground as nearly level as possible, allowing a very gentle slope so water will not stand, yet not so steep that washing of soil will be caused by each irrigation. Do not ridge, but plant on the even surface; frequent hoeings will bring the ridge soon enough.

For large patches have a strong dibble made, with a blade 5 inches long, ¾ inches wide, square on bottom or even surface edge, and broader by an inch on the same than where it attaches to handle. Have handle about 4 feet long, so that a man makes holes as he walks along the marked-out lines. Planters follow and put plants in with trowel, pressing soil firmly. As soon as row is finished make small furrow each side and run water at once. With this system you can plant about 4000 plants per each man helping you.

Follow your first watering with another in about three to five days and then as soon as possible, consistent with your soil texture, thoroughly work the soil. If weather is warm and dry, irrigate once every week or ten days. Never allow your soil to bake. Do not fertilize your newly planted beds. A good mulching during the winter or early spring is of advantage, both as a fertilizer and help to keep the soil in good condition.

There are many more do's and don'ts that could be added; one especially ere we close, and that is, do not hoe or otherwise cultivate very deep near the plant, as by so doing you disturb the young feeders. Every successful berry grower has some special little hobby of his own, but all follow out most of the rules given in this article.

### Blight-Resisting Apples in New Zealand.

**TO THE EDITOR:**—In a former issue of your valued paper you rightly said that this matter has been pushed in New Zealand while other places were asleep. By blight-proof apple is meant varieties that will resist the attack of woolly aphis. That pest is well known as "the curse of apple growing," and a variety that will resist it is worth a good deal to an orchardist; it saves time and labor in cleaning the trees, and the tree itself is always more hardy and vigorous in growth.

To start with we had the Northern Spy, Winter Majetin, Irish Peach, three kinds which were always clean; now a host of seedlings has been raised from these kinds, but only one in a thousand come blight proof, and many a disappointment has been recorded to which every experimentalist is not only liable but familiar. Still, small rewards came, among which Lord Wolseley is one of the best known. For many years now quite a number of varieties have come to the front, but a good percentage, although blight-proof, were deficient in either size, color or flavor. Happily we are now beyond that stage and can afford to pick and choose, and yet have a succession of varieties that cover the season from the very earliest to latest winter keeping kinds. So in these fair islands orchards are being planted with non-blighting apples and the varieties equal in quality with Ribston Pippin, as showy and saleable as Jonathan, and as prolific as Ben Davis.

We are gratified to hear that your Department of Agriculture is experimenting with some of our new kinds, and we trust they will be found as great a boon to yourselves as they have been to us. But your enterprising nurserymen and orchardists should not leave all the experiments to government officials, but every fruit grower should obtain scions or trees and get his own stock raised; besides this he should raise seedlings without let or hindrance, for one of the best blight-proof apples known is "Springdale," which hails from your own happy country, and may be the parent of many valuable successors.

Among the latest and best kinds tested here is a very early kind, "Marjorie Hay." It is the first apple to ripen, being before Early Harvest or Early Crofton and Astrakan. Succeeding it is Mona Hay, a fine dessert apple, streaked red on yellow ground. Climax is another new early kind well worth introducing. A number of seedlings have been raised by H. E. Sharp of this town and bear his name, and all are first-class, viz., Sharp's Early, John Sharp, Sharp's Late Red and Sharp's Nonsuch. Climax, Cliff's Seedling, Carlton, General Carrington and Taupaki are seedlings from Northern Spy; perhaps "Carlton" will be the most valuable.

The results achieved are sufficient to inspire confidence and promote interest in raising apples; the man who is first in the market with a stock of good varieties is sure to make barrels of money, and the orchards where the blight is unknown save 20% in working expenses.

The Northern Spy is used as a stock for working all kinds on and is generally a success; no other variety will do as well as a stock. But a blight-proof stock does not ensure the branches from blight. This is only secured by having the blight-proof variety and that long felt want is supplied in the kinds above named.

FRANK H. LEONARD.  
Auckland, New Zealand.



## AGRICULTURAL SCIENCE.

### The Agricultural College.

Written for the PACIFIC RURAL PRESS by ERNST DOLGE, Lamanda, Los Angeles County.

It is not denied any more that a college training in the higher branches of agriculture is not only beneficial to the intelligent farmer, but even necessary for him. The better a man is trained in a profession or a subject, the better is he fitted to get the most out of the conditions which he meets. The reason for this is that he has learned to think independently, to study the whys and wherefores, and to devise the proper ways and means to accomplish success.

All progress can be traced to the devotion of talented people to a certain subject; to people who mastered their vocation or profession and afterward opened new avenues to the world. Daniel Webster designed a plow and, although his name is greatest as a statesman, his improvement of this implement enabled the farmers on the prairies to do a great deal more work than formerly, and was a forerunner of the modern prairie breaker. Daniel Webster was born on the farm and knew all about the farming of those days. His active mind led him to think out new methods, which in turn incited others to make the improvement of farm implements a specialty. To-day it is an immense industry. [However great Webster's service in this line may have been, Thomas Jefferson was the greatest plow expert among American statesmen.—Ed.]

Farming of the present day is no longer a simple calling, but a profession—one which needs and certainly ought to have just as much preparation and study as any other profession. Whenever a farmer has had the advantage of a college course he is in every respect the equal of any other college graduate—lawyer, doctor, etc. While he is equal to any professional man because of his learning, he has the advantage of a better chance of making his livelihood than a majority of the physicians, etc.

The demand for professional managers of farm properties is increasing at a rapid pace, and land owners have learned that it pays to buy the best brains to manage a farm just as much as it pays to buy the latest up-to-date machinery.

A competent manager of a farm property is expected to have a sufficient knowledge of chemistry to be capable of judging soils, the quality, use and proper application of fertilizers, etc. Furthermore, he must be perfectly at home in botany and plant life, horticulture and viticulture, even from the nursery to the well-built and well-kept orchard and vineyard. Such a man will always command a good salary, if he has no farm of his own, because he can produce good results.

It can hardly be disputed that every farmer who is financially able to do so ought to send his boys to college, and to let them study agriculture rather than to prepare them for the uncertain existence of the other professions. Agriculture is not so overcrowded as the other means to a livelihood.

Unfortunately, the majority of the farmers are not earning sufficient from their land to support their sons during the six years which are required for the preparation and the college course. Still, they are fully convinced by their own experience that their sons ought to learn more about the science of farming than they know themselves.

The United States Government is trying more and more to assist the farmers by issuing bulletins on the various topics of agriculture. The bulletins are written by scientists who have made most exhaustive studies of each subject, and are, therefore, authoritative. Every farmer ought to read them most carefully. But while these bulletins are of great value, they cannot possibly supplant the college training, for the reason that they only treat certain subjects, and these without any connection.

To become an expert in anything requires consecutive study, beginning with the primer and following up exactly as in the ordinary school work. Every young farmer ought to endeavor to become an expert, and those whose means will permit ought to take a full course in any of our excellent agricultural colleges. It is time and money well spent. But whenever circumstances will not permit of that, then he must do the next best thing and take a correspondence course.

We find to-day in the form of the "Farmers' Reading Courses" the ideal method of education for the young farmer who cannot attend college. The courses are a system of instruction by correspondence, conducted by some of the leading agricultural colleges. The oldest and one of the largest of these is that of the Pennsylvania State College, under the superintendence of Prof. George C. Watson, who has made his institution famous in this way.

When a person becomes a member he has the choice of a variety of courses, including general agriculture, animal industry, horticulture, dairying and miscellaneous. Each of these is again subdivided, making a completion of the course the work of several years and a guarantee of thoroughness.

In giving instruction through the mail the method pursued is as follows: The student is referred to a

prescribed textbook on the subject he is taking, and in addition the college sends a separate paper explaining such matters as are apt to be difficult for the student to understand. By conscientious study the lesson is soon mastered and the question proper, which is sent with the lesson, is taken up. Without referring to the textbook or lesson, the student endeavors to answer the paper in detail, at the same time making inquiries about anything that he would like to have explained. When a question paper has been satisfactorily answered the next lesson is sent, and thus the course goes on.

This opportunity of winning an education is within the reach of all, as the only expense incurred is in the purchase of the necessary books, which the student can get at greatly reduced rates, and the postage on the papers sent to the college. Tuition is free.

Anyone who is able to read and write is eligible. The student who has had the advantage of a higher education encounters much less difficulty, of course, but with sufficient good will anybody can succeed.

I beg to refer the interested reader to Farmers' Bulletin No. 109, in which Prof. L. H. Bailey discusses the Reading Courses. This bulletin will be sent free on application to the Secretary of Agriculture, Washington, D. C.

Aside from the practical knowledge which the young farmer acquires by conscientiously working out the correspondence courses, he has the even greater benefit of being taught to reason logically. This enlarges his horizon to such an extent that he gets more out of life than the average man whose calling confines him to the hum drum of city life.

## TRACK AND FARM.

### Will There Be a Two-Minute Trotter?

The lowering of the trotting record to 2:02½ by Cresceus, as described in our last issue, makes conjectures as to how the record can go interesting. A writer in the Boston Plowman believes that the record will go to 2 minutes and states his reasons why there had not been much real advance in that direction for years preceding the triumph of Cresceus. Those who argue that no trotter will ever take a record in 2 minutes claim that there really has been no improvement in the trotters themselves since the days of Maud S. (2:08½). They contend that the lower records since made have been due to the improvement in tracks and the introduction of the light, easy-running bike sulky.

If there has been no improvement in actual speed capacity of trotters since the day that Maud S. trotted that memorable mile in 2:08½ to high wheels on the regulation track at Cleveland, O., July 30, 1885, there is good cause for it, and it does not follow that there will not be further improvement in the near future.

**A QUESTION OF BREEDING.**—A study of the blood lines of those world's trotting record breakers, Jay-Eye-See (2:10), Maud S. (2:08½) and Sunol (2:08½), should have taught all intelligent, practical, trotting horse breeders a valuable lesson, but it evidently did not. The only one of the three named that was bred by a man who had a systematic plan of introducing a thoroughbred race-winning cross for the purpose of improving the speed capacity of the trotter, and who believed that such a system breeding would insure greater speed ability, was Gov. Stanford, who bred Sunol (2:08½). The others were what might justly be termed accidents. It is true that both Jay-Eye-See and Maud S. were bred for trotters, but their breeders probably had no more idea that they would prove record breakers than they had of taking a trip to the moon.

The breeding of a granddaughter of that renowned thoroughbred race horse Boston to Harold, a son of that greatest of all progenitors of trotting action, Rysdyk's Hambletonian; and the breeding of a granddaughter of Boston's greatest son, the noted 4-mile record breaker, Lexington, to Dictator, another son of Rysdyk's Hambletonian, were in one sense accidental experiments. A somewhat similar experiment had been made years before, when a daughter of the successful thoroughbred race horse Gano, a horse bred in lines similar to those that produced Boston and Lexington, was bred to Mambrino Chief. The result was Lady Thorn (2:18½), the fastest trotter got by Mambrino Chief, and one of the greatest of her day. A granddaughter of Lexington bred to Electioneer, another son of Rysdyk's Hambletonian, produced the world's trotting record breaker Sunol (2:08½).

The results of such a blending of the best of trotting lines with the best of race-winning thoroughbred lines should have proved a valuable lesson to all practical breeders of trotting stock—a lesson by which they might have profited greatly. Most of them failed to do so, however. There was a reason for it. The reason was this:

**THE ILLS OF THE STANDARD.**—About the time that Jay-Eye-See and Maud S. became world's trotting champions every one was urged to breed stock eligible to registry in the standard department of the

American Trotting Register. A set of rules governing the standard had been formulated and adopted. The effect of those rules from the first was to discourage breeding in those lines that had improved the trotting capacity greatly and produced world's champion trotters. The rules themselves as first adopted were not very bad, because standard stock could be bred from a mare whose dam (like the dams of Jay-Eye-See, 2:10, Maud S., 2:08½, and Sunol, 2:08½) was from a thoroughbred, but later they were so changed that now it is not possible to get a thoroughbred cross nearer than four removes and have the animal eligible to standard registry.

Directly after the rules were adopted and the cry bred only from standard animals was raised, the price of standard-bred stock went up. It was easy to breed that kind, and there was such a profit in doing so that nearly all the breeders, even those in Kentucky, paid no attention to anything else but the standard. The most worthless of stallions and mares could be and were sold at high prices if they were only standard bred and registered. The inevitable result was a general deterioration in the quality of the trotting stock throughout the country, and that, more than all other causes combined, has, in the opinion of the writer, been the cause of the lack of improvement in the extreme speed ability of the trotter of to-day.

**INDEPENDENT BREEDERS AND WHAT THEY ACCOMPLISHED.**—It is true that there were several breeders who paid no attention to the standard. Conspicuous among them were the late Governor Stanford of Palo Alto and Cicero J. Hamlin, founder of the noted Village Farm establishment. The breeding methods of these gentlemen were condemned and ridiculed by the founder of the American Trotting Register and his followers. Mr. Hamlin, however, bred the present world's champion trotting gelding, The Abbot (2:03½), and Governor Stanford bred Chimes, the sire of The Abbot.

Had a majority of the most extensive breeders in Kentucky and California devoted their attention to the improvement of the speed capacity of their trotters, and studied the records and Register to learn what means or method of breeding had given the trotters Jay-Eye-See (2:10) and Maud S. (2:08½) the ability to trot so much faster than any others had previously done, the 2-minute goal would undoubtedly have been passed ere this. Most men in those localities bred for the market. So great stress was laid upon the standard that registered animals brought high prices whether they could show speed or not, even when they were lacking in size and were of faulty conformation as well as action.

It was easy to breed standard ones. Any fool could do it. All the requirements were a standard stallion and a standard mare. The standard-bred one came every time and sold for big money, whether the sire and dam had merit or were utterly worthless. The first question that many Northern buyers then asked when an animal was shown them in Kentucky was, Is he or she standard bred? Ninety-nine out of every hundred that asked the question could not tell with an extended and tabulated pedigree before them whether the animals were standard bred or not. Is it surprising that under such conditions the quality of the great mass of trotting stock of the country has deteriorated during the past fifteen years?

**THE NEW ROUTE.**—We believe that it is only a question of time when the two-minute record will be made by a trotter. All the arguments in the world will not change the facts. Progress, both intelligent and accidental, will continue to be made. We believe that the speed ability of trotters will be increased in the future, just as it has been in the past, by introducing fresh infusion of racing blood either from the fastest and stoutest of race winners themselves or their descendants. This breeding-up process and assimilation of the best of racing with the best of what is termed trotting blood will be continued, until finally the cold crosses will be so deeply buried that the influence exerted by such will be nearly if not quite overcome in a majority of cases. The improvement in the near future will be in the speed capacity of the animals rather than in tracks, sulkies and other appliances.

There is a difference of opinion among successful trainers in regard to the limit of trotting speed. E. F. Geers, who is as well qualified by experience as the best of them, states in his work recently published that he believes that the trotting record will be lowered to two minutes.

### The Prune Drop at Calistoga.

**TO THE EDITOR:**—Prune picking has just commenced here. Some people with whom I have talked about this year's crop say they think there will be one-fourth of a crop. I went through eight prune orchards here a few days since. I think from one-fifth to one-sixth of a crop would be nearer the mark. I had nine and one-half tons of dried prunes last year, but do not think I will have over one and one-quarter tons this season. But they will be very fine ones, as most of the prunes will be in this part of the valley.

IRA W. ADAMS.  
Calistoga, August 28.



## THE FIELD.

## Agriculture in Alaska.

Hon. William R. Merriam, Director of the Census, has just published the statistics of agriculture for the Territory of Alaska. The enumeration was made in the summer of 1900 by special agents, the first representatives of a United States census to collect statistics of agriculture in the Territory. The tabulated returns indicate that the farming industry is insignificant, being a subsidiary pursuit. The leading industries are mining, fishing, and the canning of fish. The value of the agricultural products was but 12.7 cents for each inhabitant of the Territory, and 24.4 cents for each inhabitant of the southern district, in which all the farms reported are located. This is in marked contrast to the agricultural conditions in the States and other Territories. For each inhabitant of Arizona the average value of agricultural products in 1889 was \$57, and of the United States, in 1889, \$39.

The area of the twelve farms reported in Alaska in 1900 is 159 acres, of which 104 acres are devoted to the cultivation of vegetables and hay, and the remainder is used for pasturage. The total farm products were valued at \$8046. These farms are all south of the Kuskokwim river, in southeastern Alaska, and along the southern coast, including the Aleutian islands. In this section there are two centers of agricultural activity, one on the southeastern coast in the vicinity of Juneau and Sitka, and the other in the southwest in the region about Cook inlet and Kodiak island. The United States Department of Agriculture maintains experiment stations at Sitka and at Kenai on Cook inlet, but no reports were secured of the land or live stock owned.

North of the sixty-second parallel agricultural operations are generally confined to small vegetable gardens, from which sales are rarely made. A small farm operated in connection with the Holy Cross Mission, on the lower Yukon, and a few gardens near Circle City produce vegetables for market occasionally. Other small gardens are found in most of the villages of the Yukon valley.

The values given are of the buildings and other improvements only, and not of the land, as no titles have been secured by the farmers, owing to the fact that no official surveys have been made. It is to be regretted that the special agents failed to secure reports concerning the farming operations of the Indians. The Thlingits, inhabiting the southern coast, and the Aleuts, on the Alaskan peninsula and neighboring islands, have made substantial beginnings in agriculture. Nearly every village of the natives on the southern coast has its community garden, and several individual gardens are found.

**NUMBER, AREA AND VALUE OF FARMS.**—The total farm wealth of Alaska, June 1, 1900, is \$15,686, of which \$2196 are invested in live stock, \$690 in implements and machinery, and \$12,800 represent the value of buildings and other improvements. Buildings have been erected upon nine of the twelve farms.

The main expense incurred by the settlers in opening farms has been in the preparation of the soil for cultivation. This has been very high—in some instances \$120 per acre.

## SIZE OF FARMS AND PRINCIPAL PRODUCTS.

CLASSES.	Number of farms.	Number of acres.	Number of farms of which the principal product is—		
			Vegetables.	Poultry and eggs.	Hay and ensilage.
The Territory...	12	159	9	1	2
Under 3 acres.....	5	5	4	1	...
2 and under 10 acres..	3	13	3	...	...
20 and under 50 acres.	4	141	2	...	2

The five farms reporting less than three acres are small market gardens. Four are devoted exclusively to the cultivation of vegetables, and on the other farm poultry is raised. The value of the products of these five farms in 1899 was \$627, of which \$532 were from vegetables and \$95 from poultry and eggs.

Vegetables are the chief source of income of the three farms containing from three to nine acres each. In 1899 these farms, with thirteen acres of land under cultivation, yielded \$3010 worth of produce. Of that amount, vegetables contributed \$2655; poultry and eggs, \$195; hay, \$160.

The other four farms contain from twenty to forty-nine acres each, and have a total area of 141 acres of improved land. The operators devote small areas to vegetables, and, in addition, cut considerable quantities of grass. The values of the products raised in 1899 were as follows: Vegetables, \$2378; hay and ensilage, \$1180; live animals sold, \$310; dairy products, \$292; poultry and eggs, \$249—a total of \$4409. The principal source of income of two of these farms was vegetables, while that of the other two was hay and ensilage. The United States experiment station in

Sitka in 1899 cleared six acres, and the one at Kenai had three acres under cultivation.

**LIVE STOCK.**—The numbers and value of domestic animals and poultry are as follows:

ANIMALS AND FOWLS.	Age, in years.	Number.	Value.
Dairy cows.....	2 and over..	13	\$810
Oxen.....	Over 3.....	4	450
Bulls.....	Over 1.....	1	55
Horses.....	Over 2.....	5	465
Swine.....	All ages.....	10	100
Dogs.....	.....	3	150
Chickens.....	.....	176	166
Total.....	.....	.....	\$2196

The animals reported, except one horse, were found upon the four farms containing from twenty to forty-nine acres each. The work animals comprise five horses, valued at \$465; four oxen, valued at \$450; and 3 Eskimo dogs, valued at \$150. The dogs were in use experimentally on a farm near Juneau. The relatively higher valuation of oxen than horses is explained by the statement that they are better adapted to farm work in Alaska, as they can be kept at less expense and are less susceptible to cold. The native grasses furnish abundant pasturage in the summer, and roots and ensilage take the place of natural forage in winter.

A herd of ten swine was found on a farm at Juneau, but no sales were reported in 1899. The lack of grain is an obstacle to success in this branch of stock raising, though it is partially overcome by the substitution of root crops. The table is for animals on farms only, no enumeration having been made of cows, reindeer, pack dogs and other live stock owned by Indians, or kept in towns and villages. On many of the small islands along the coast of the Alaskan peninsula, and notably on Sanak and Shumagen islands, cattle are very successfully raised. No detailed report was obtained of the number of cattle kept on these islands nor of those on Douglas island, near Juneau, where a number of cows are kept for dairy purposes. The table presents a very incomplete summary, as the unenumerated stock exceeds in number and value the stock reported.

**VEGETABLES.**—The cultivation of vegetables occupies the most important place in the agriculture of Alaska. This is the result of natural conditions. The mean annual temperature is too low, and the season between killing frosts too short, to permit the successful cultivation of cereals. The long periods of daylight, the comparatively high temperature, and the abundant rainfall, which mark the brief growing season, are highly favorable to the rapid growth and early maturity of nearly all kinds of vegetables, for which there is an active demand and ready market in the large towns and mining camps. Turnips, including rutabagas, in 1899, returned the largest revenue; potatoes and carrots were also quite remunerative. Onions and pease were successful under favorable circumstances only.

The Moravian missionaries grow vegetables in different parts of the Territory, their gardens in the Kuskokwim valley, and at Carmel, in the Nushagak district, being especially prosperous, but no report was secured.

The following table indicates the number of farms on which the different varieties of vegetables were grown, the area devoted to each, the quantities produced, and values:

## VEGETABLES GROWN IN 1899.

PRODUCTS.	Number of farms reporting.....	Number of acres..	Unit of measure..	Quantity.....	Value.....
The Territory.....	26	.....	.....	.....	\$5,565
Beets.....	4	2	Bushels	171	205
Cabbage.....	9	3	Heads	1,415	141
Carrots.....	2	6	Bushels	680	850
Celery.....	2	.....	Bunches	400	80
Lettuce.....	7	1	Bushels	506	790
Onions.....	1	.....	do	7	10
Pease.....	3	.....	do	3	8
Potatoes.....	11	8	do	798	1,371
Radishes.....	4	.....	Bunches	16,460	708
Rhubarb.....	1	.....	do	50	3
Turnips.....	7	6	Bushels	987	1,399

The greater portions of the lettuce and radishes reported were grown near Juneau in a hothouse in which several crops were raised within the year.

**HAY AND ENSILAGE.**—Next to vegetables, grass cut for hay and ensilage is the most important agricultural product. Upon six farms seventy-eight acres of grass were mowed, yielding a product of 113 tons. Very little of it properly can be called hay. Experience has shown that the uncertain climate renders impracticable any attempt to cure the heavy native grasses in the ordinary manner. This difficulty has been met by the construction of silos, of which, in 1899, there were four, having a total ca-

capacity of 130 tons. Very little, if any, "tame" grass is grown, and the silos are filled with beach, or other native grasses, several varieties of which grow in abundance, both on the coast and in the interior.

## CROPS AND PRODUCTS OF 1899.

PRODUCTS.	Number of farms reporting.....	Number of acres..	Unit of weight or measure.....	Quantity.....	Value.....
The Territory.....	104	.....	.....	.....	\$8,046
Vegetables.....	12	26	.....	.....	5,565
Hay and ensilage	6	78	Tons	113	1,340
Chickens.....	5	.....	Number	177	179
Eggs.....	5	.....	Dozens	843	360
Calves, sold.....	3	.....	.....	.....	310
Milk.....	1	.....	Gallons	684	274
Butter.....	1	.....	Pounds	50	18

From the thirteen cows reported in 1899, \$292 were realized from dairy products and \$310 from the sale of veal calves.

**POULTRY.**—From the standpoint of income upon capital invested, poultry raising in 1899 was relatively the most profitable branch of Alaskan agriculture. The stock on hand, June 1, 1900, consists of 176 fowls, valued at \$166. The total income was \$539 in 1899. Of this sum, \$360 were derived from eggs, and \$179 from the sale of chickens. Eggs found a ready market at an average price of 40 cents a dozen, while the average amount received for fowls was \$1.01 each.

**AGRICULTURE BY INDIANS.**—Potatoes, cabbage, turnips, carrots, lettuce, radishes and other vegetables of the hardier varieties are cultivated by the Indians, potatoes being the principal crop. At Tyonek, in a recent favorable year, over 300 bushels of potatoes were raised. Some barley was grown on Kodiak island from seed furnished by the agricultural experiment stations. With that exception no cereals have been successfully grown. Enough hay is usually gathered to feed the domestic animals through the winter. The wild grass is cut with sickles and hung on trees or poles to cure. The Indians understand the importance of fertilizing, and gather large quantities of kelp and seaweed for the purpose.

Stock raising is a very limited industry, although the number of domestic animals owned by the natives is greater than that reported for the farms. At Neulchik they own over thirty head of neat cattle, each family having at least one cow. The cows are of hardy Russian stock, are small, and give but little milk.

Near some villages, contact with white men has taught the natives the use of improved farm utensils, but in other localities they till the land with staves and other crude implements. The missionaries are introducing modern tools among the Indians and are instructing them in improved methods of agriculture. The establishment of agricultural experiment stations has been very beneficial, and gives promise of accomplishing still greater results.

## Prune Association Dividends.

Four dividends have been paid by the California Cured Fruit Association, but no single grower has had all of them unless he had fruit that was delivered to the Association before Nov. 2, and also some that was delivered after that date. The accountant of the Association, after specifying dividends Nos. 1, 2 and 3, says:

"Dividend No. 4 was declared entirely on sizes, the other dividends being cash payments on account and was figured on the following basis: Each grower's account was figured on the basis of size, as if nothing had been previously paid. The amounts paid him on previous dividends were then deducted and the balance, if any, paid to him as dividend No. 4. The following is the table of figures used in computing the last dividend and represents the total amount per pound paid by the Association to date on each size and variety of prunes in District No. 3. In calculating your dividend by these figures, multiply the number of pounds of each size of fruit that you have delivered to the Association by the price per pound in the table below, add the results, subtract the amounts paid you on previous dividends and the remainder will be the amount due on dividend No. 4, which was declared on Aug. 7, 1901:

SIZES.	1st quality.		2nd quality.	
	French.	Cents.	French.	Cents.
20-30 ..	3.28606000	.....	.....	.....
30-40 ..	2.57154700	.....	.....	.....
40-50 ..	2.14286400	1.92264000	5.02704000	2.800000
50-60 ..	1.66829900	1.44809600	2.27622000	1.776220
60-70 ..	1.37201170	1.15180550	1.60299000	1.382600
70-80 ..	1.14613710	0.92592900	1.45845000	1.238300
80-90 ..	0.95017533	0.72996700	1.18048300	0.940600
10-100 ..	0.64024720	0.42004000	1.04129500	0.810000
100-120 ..	0.73776378	0.51755618	0.93586410	0.715700
120 up ..	0.39669710	0.16595700	0.71547880	0.490000



## Agricultural Review.

### BUTTE.

**EFFECT OF IRRIGATION.**—Oroville Register: On the Onyett or Bonito orchard are 512 trees of Tuscan Cling peaches. These peaches heretofore have not attained a satisfactory size to sell to the cannery, so this season A. Moncure, general manager of the Hearst properties in Butte county, concluded to irrigate these trees. The result was astonishing, for from the 512 trees there were picked and shipped to the cannery seventy-four tons of peaches, while twenty tons, not large enough to meet the requirements, were dried. Water was only applied once to the trees. This is a trifle less than 350 pounds of fruit to each tree.

**PROFITS IN FIGS.**—Oroville Register: J. A. Cleveland of Thermalito has thirty-three White Smyrna fig trees along his sidewalk and near his house for shade trees. From these thirty-three trees last year he gathered and sold figs to the value of \$150. This year, as the trees are larger and a year older, he says he will get for his crop fully \$200, which means a trifle over \$6 to the tree. Not more than thirty trees ought to be planted to the acre, but the care of them is little; and if the fruit is simply picked up and dried, \$200 an acre can be counted upon when the trees are ten or eleven years old.

### COLUSA.

**SHIPPING TAR WEED.**—Colusa Herald: J. W. Thompson of College City, has been cutting and baling Grindella robusta, commonly known as tar weed, for J. C. Mogk, who is shipping it East. He has cut and baled thus far 48 bales, averaging 250 pounds each. Mr. Mogk last year shipped about 75 bales. It is used in the manufacture of patent cough medicine.

### CONTRA COSTA.

**BIG CLUSTER OF SULTANAS.**—Antioch Ledger: W. E. Hay has the largest cluster of Sultana grapes ever picked from a vine in this county. It weighs five pounds and was grown near Antioch.

### FRESNO.

**IN THE VINEYARDS.**—Fresno Republican: The picking of grapes has begun in good earnest. The vineyards, except in a few belated instances, are alive with busy workers and everybody in the business of growing vines is laboring hard. But there are no white pickers in the fields. There are a few Indians, but the major part of the toilers come from the Orient—from the Land of the Rising Sun, from the Celestial Kingdom, from the Malay Islands or from Asiatic Russia. Caucasians are noticeable owing to their absence. There are very few even of the foremen who are white people. The workers are paid in general by the tray. With the Chinese and the Japanese all the negotiations are carried on with one man in the gang who is known as the boss and is held personally responsible for the work of the men who are under him. This man is generally the contractor who furnishes the men and his profit comes out of the terms he makes with the men himself. The average payment is \$1.75 a day to each man, and this is the established rate paid this year to laborers engaged by the day. As to the crop in this county it will run, according to the best judges, at about two-thirds of what it was last year. Thus in one case where one prominent grower had a crop of 61½ tons to the acre last year he calculates this season on getting only 40 tons. The quality of the crop is very good and is so pronounced by all the growers and the men to whom they look to do the buying.

### KINGS.

**PEACH PITS FOR FUEL.**—Hanford Sentinel: Peach pits are offered for \$1.50 a wagon load, delivered. The party selling them claims that, as an article of fuel, the pits at the price quoted are equal to wood at \$2 a cord. In using the pits as fuel, it is necessary to shut off all the draft in the stove after the fire is under way.

**THE RAISIN HARVEST.**—Hanford Journal: The grape growers are preparing for the harvest, and a few have already commenced picking. Owing to the frost last spring, the fruit crop is light, and nearly all the growers will, we hear, make only one picking for raisins; hence the lateness in starting picking this year generally, to give the first and second crop a chance to ripen in as large quantities as possible. The remainder, after the picking, will be sold to the winery or hogged off. The raisin crop is going to be light. So far we have heard of no scarcity of labor for grape picking. One reason for this is, no doubt, the fact that there is a very light prune crop. As prunes and raisins are harvested at nearly the same time, a large prune harvest takes many hands which will this year go into the raisin vineyards.

### LOS ANGELES.

**LIGHT PACK OF PEARS.**—Pomona Progress: The last carload of pears for the season has been received at the cannery. Only five carloads have been handled this year, as the crop has been light. Peaches are still coming in and will continue to come for two weeks. Work will be commenced on tomatoes, the first coming from Vernondale. The cannery expects to put up about a quarter of a million cans of tomatoes.

**WINE VATS EMPTY.**—Pasadena Star: Wine buyers have caused to be given out that they would pay from \$15 to \$17 a ton, but they are not yet getting any at those figures. The wine makers have nothing on which to run over a year, because last year's vintage was only about one-third of what ordinarily is made in this district. On the 1st of January there were in San Diego, San Bernardino and Los Angeles counties 236,000 gallons of port, 201,000 gallons of sherry, 40,000 gallons of angelica, 120,000 gallons of muscatel and 400,000 (approximately) gallons of clarets. Every gallon of this has since been sold, and the wine men are gazing ruefully at the empty vats and at blistering vineyards, wondering what next. With the grapes now available the vintage should amount to about 800,000 gallons.

**PRICES FOR GRAPES.**—A Los Angeles dispatch states that at a meeting of wine growers held in above city the highest prices for grapes in southern California for twenty years were fixed for the ensuing season, as follows: Black grapes—Petit Pinot, Trousseau, Petit Bouchet and Lenoir varieties, \$18; Zinfandel, \$16.50; all other varieties of black grapes, \$16. Valley grapes, Downey district—Charbono, \$16; Zinfandel, \$14.50; Blau Elba and other varieties, \$14. White grapes, foothill—Riesling, \$18; Berger and others, \$14; Muscat, first quality, \$14; second quality, \$12; Sultana, \$16. Valley, Berger, \$12; Riesling, \$16. The \$2 a ton difference between the valley and foothill products is due to the fact that the valley only gives two crops a year, of not so good quality for wine purposes.

### MERCED.

**FINE IMPORTED SHEEP.**—Merced Star: There was recently received at the Bliss ranch, on the Chowchilla, 19 miles from Merced, six very fine rams. The animals were purchased in England by J. G. Massey of Colorado for George D. Bliss. They are the thoroughbred Hampshire down, two years old, and weigh about 200 pounds each. They cost \$140 each, and the cost of bringing them here was \$20 apiece. On the way they were placed on exhibition at the Pan-American Exposition, where they attracted much attention. Mr. Bliss has about 400 ewes, all of high grade, being a cross of Shropshire down. Their large size makes them especially valuable for mutton, while the wool is very long and fine and commands a much higher price than common wool. At Christmas time last year fourteen wethers were sent to the San Francisco market from the Bliss ranch which created a sensation among the marketmen. They weighed 172 pounds each, dressed—nearly four times the weight of an ordinary sheep carcass.

### NAPA.

**FRUIT NEWS.**—Napa Register: About fifty hands are employed at present by the Napa Fruit Co. in dipping, drying, grading and packing prunes. The fruit, though not so plentiful as last year, is said to be of better quality. One hundred and thirty tons were shipped East last week in twenty-five and fifty pound boxes. Apples are keeping a large force of employees at work at H. M. Russell's drier in east Napa. Six or seven tons are evaporated daily. Four hundred and fifty tons of the fruit will be shipped from the institution this year. It was purchased in Napa and Suisun valleys.

### PLACER.

**HEAVY SHIPMENTS OF PEACHES.**—Newcastle News: Peaches have been coming in freely the last few days and just now the Salways are at their height. Last week seventy-six carloads of Newcastle luscious fruit was sent East, against thirty-three of the previous week. The shipments to date will show a falling off compared with last year. Recent cool weather has held fruit back, and it may be found at the close of the season that the shipments will nearly equal that of last year. A few Levi Clings, the canner's favorite, have made their appearance, but it will be a few days yet before many will go to the cannery. Pears and grapes appear to be quite plentiful at the shipping houses.

### RIVERSIDE.

**BUYING ELSINORE HONEY.**—Elsinore Press: Judson House, representing A. Gregory of Redlands, purchased the honey crop of J. H. Holman and Charles Hauk, amounting to 1600 cases of comb.

One car of it has already been loaded at Elsinore. The price paid was 9½¢ f. o. h. at this station, which is 1¢ more than previous offers. All the comb honey held by Elsinore people has been contracted for at 9½¢. Most of this is in small lots, but combined it will make a big carload.

### SAN BERNARDINO.

**FEWER ORANGES THIS YEAR.**—San Bernardino Sun: During the past few days various estimates have been made of the orange crop for the coming season. All the estimates made so far are to the effect that the crop will be from 10% to 20% less in this county than it was in the season just passed. The orange crops in this county are not the only crops that will be below the standard, as in Riverside it is estimated that the crop of oranges this year will be fully 30% less than it was last season.

### SANTA CLARA.

**BIG PRICES FOR GRAPES.**—Gilroy Gazette: While the wine associations in the southern part of the State have fixed a price of \$20 to \$22 for wine grapes, the growers in Santa Clara county are deriving the benefit of competition. E. I. Whiting last week sold his crop of about fifty tons for \$27, and it is reported that Miller & Lux disposed of their big vineyard for \$26 a ton. These prices, of course, are for choice varieties, but dealers are anxious to get them at those figures.

**MORE BIG PEACHES.**—Salinas Index: S. N. Matthews received a box of peaches yesterday from Henry Miller's Mount Madonna ranch, situated between Watsonville and Gilroy. The box weighed 150 pounds, and Mr. Matthews says that the smallest peach in the lot measured 9½ inches in circumference, while the largest was an even 12 inches. They raise big peaches over Gilroy way.

### SANTA CRUZ.

**THE APPLE CROP.**—Watsonville Pajaronian. Apples are growing nicely. They have never looked better in Pajaro orchards. When the picking season is finished we believe the crop will be found above the early estimates of packers. There has been no heavy "drop" of any variety this year. The price of Newtowns is a bit soft, prices shading not much above \$1 per box. But price quotations on this variety of apple cut but little figure at present. The Newtowns not contracted are being held—and they will keep for a long time. The price of choice four-tier Belleflowers is firm at \$1 per box. At this price, these apples are selling at 2½¢ per pound on board of cars in this city. It means that Belleflowers will have to sell at \$2 per box and upwards at Denver, Butte and other points East.

### SONOMA.

**ANIMALS LIKE FRUIT.**—Santa Rosa Democrat: A correspondent writes from the Summit Joint district that there seems to be an extra supply of foxes, coons and ground squirrels in that district this year and that these animals are making havoc with the fruit, more particularly the French prune crop. Even after the fruit has been picked and spread upon the drying trays the four-footed thieves have come and helped themselves and have been pretty much of a nuisance. Many of the marauders of the fruit orchards and drying yards have ended their existence in the sharp teeth of traps set for their unwary feet.

**TWENTY DOLLARS FOR GRAPES.**—Sebastopol Times: Grape buyers are now in the field for this season's crop. Last week the California Wine Association fixed a maximum price of \$15 per ton, but already that figure has been raised and at present a number of wine makers are offering \$20 for Zinfandels and \$18 for Missions. Charles Solomon of this place has been appointed agent for the Italian-Swiss Colony of Asti, and he is offering the above figures for grapes delivered at the Sebastopol winery. It is understood that about 2000 tons will be crushed here during the season.

### STANISLAUS.

**FARM LAND \$100 PER ACRE.**—Modesto Herald: An example of thrift and frugality was rendered conspicuous recently by the sale of the land known as the Brinkerhoff bottom, just east of the Modesto bridge, to the lessees for \$100 per acre. The tract comprises seventy-five acres, a small percentage of it upland. The purchasers are Lorenzo Cuneo, Joseph Arata and John B. Podesto, and it is pretty well known that they made the purchase money out of the land as lessees, in the meantime paying a good price for the lease. They have devoted the land to garden truck.

### SUTTER.

**HAY BRINGING GOOD PRICES.**—Sutter Independent: People who are not well supplied with hay for the winter would do well to stock up now. Already good grain

hay is selling from \$8 to \$10, delivered, and alfalfa from \$7 to \$8. The cause of the scarcity of hay is due to the fact that farmers early in the season thought that their prospects for grain were good and let the greater portion of it stand; hence very little hay was cut.

**LAND AT A BARGAIN.**—Sutter County Farmer: The auction sale of the Abe Clouser farm, northwest of Live Oak, took place recently and was bought by J. A. Onstott of this place for \$4960, being \$15.50 per acre for 320 acres. Mr. Onstott certainly got a bargain, as the land is first class and the improvements good.

**FARMERS UNEASY ABOUT EXPOSED GRAIN.**—Sutter Independent: Thousands upon thousands of sacks of wheat piled along the banks of the Sacramento river, between Meridian and Grand Island, with no prospects of transportation before the fall rains, is a situation much deplored by the farmers and business men of that section. The strike in San Francisco is being condemned by these grain raisers in no uncertain tones.

### TULARE.

**SECOND CROP PEACHES.**—Tulare Register: John W. Dunlap exhibits a sample of a second-crop peach, and declares that if the frost holds off he is likely to have tons of peaches yet that will be good for hog feed. Some of his trees are literally loaded with them, all the way from the size of a marble to two inches through. They are clings, not of bad flavor, and Mr. Dunlap avers that they grew without blossoms, or, at any rate, he never saw a blossom on the trees, though he has been in and among the trees constantly. The first crop came from blossoms all right, and, while scanty, the fruit was very large; but this second crop comes from nowhere in particular, and, like Topsy in "Uncle Tom's Cabin," just "grewed."

**A NATURAL APPLE BIN.**—Visalia Delta: J. J. Doyle says he has a hollow log at Summerhome which, without any further preparation, will hold twenty tons of apples, and he is thinking seriously of stowing his apple crop there. The hollow can be enlarged, if necessary, to hold over 100 tons.

### VENTURA.

**LEASED A BIG RANCH.**—Oxnard Courier: The American Beet Sugar Co. has leased the Las Posas ranch, in Ventura county, and it will be operated by a corporation. The ranch embraces 14,000 acres, of which 6000 acres is believed to be adapted to sugar beet culture. The land embraced in this large ranch runs through the extent of the Las Posas valley, being bounded on the west by the Santa Clara rancho and on the east by what is known as the Little Sim. The town of Somis is within its borders and the railroad runs through it for several miles, thus making the arrangement very favorable for the shipment of beets to Oxnard with the erection of a dump. The soil is for the most part of a rich adobe caste, and in many places, where not of too great an elevation, will raise good heats. It has for years been a good Lima bean section and also produces a heavy output of grain every season.

**WAREHOUSES FILLING UP.**—Hueneme Herald: The Hueneme warehouses are being gradually filled up with bright golden harvest. During the past week considerable grain has been hauled in from the Simi by teams. When the hulk of the Conejo harvest seeks storage the warehouses here will be well filled. Owing to the great demand for crushed feed, barley is being consumed quite rapidly by the many teams at work hauling beets, and the question of seed barley for next season is being discussed.

### YOLO.

**PURCHASE OF WINE GRAPES.**—Yolo Mail: Mr. Migliavaca of Napa, who does not belong to the Association, met several of our grape growers Monday and after canvassing the situation carefully agreed to give \$18 per ton for Zinfandel grapes, \$12 for Tokays and \$12 for Muscats, and he contracted for about 500 tons of wine grapes at the above figures.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular. THE LAWRENCE-WILLIAMS CO., Cleveland O



## THE HOME CIRCLE.

## Three Summer Sonnets.

Thou hast unveiled thy face, O summer fair,  
And lookest with unfathomable eyes  
On land and sea, as if thou wouldst baptize  
The world in thine own joy; thou com'st,  
and where  
Thy glad feet press a thousand flowers  
prepare  
To hail thy presence in resplendent dyes,  
And when thou whisperest, answering  
whispers rise,  
As those breathed by pine trees on the  
air:—  
Thou art an incarnation of the year,  
With all its sweetness in thy soul ex-  
pressed;  
A priestess passionate, a rose-crowned  
seer,  
A white Madonna in whose virgin breast,  
Beneath its calms, ineffable, appear  
Shadows of an ineffable unrest!

The butterflies are winging to and fro,  
And clover blossoms, purple flaunting,  
swing  
And the wild blackberry vines, their per-  
fumes fling  
On the warm winds that kiss them as they  
blow.  
Upon the turquoise heavens the light  
clouds go  
Illusive sailing eastward, as to bring  
News from the sunrise, where the orioles  
sing,  
Caught in its meshes, to their mates be-  
low;  
The grasses glisten and the bees, elate,  
Seale the sun's dazzling ladders, side by  
side,  
And languid winning with their honeyed  
freight  
In the full-breasted thistles seek to hide;  
And the wild roses, color brimmed, trans-  
late  
What radiant visions in June's soul abide.

## THE HUMMING BIRD.

Gay, plumaged bird that slender dartest  
by  
From the azaleas, with thy tiny power  
Shaking the dewdrops in a perfumed  
shower,  
We know by thee the Summer's heart  
beats high.  
Thou turnest from the honeysuckles nigh  
To hover o'er a gorgeous trumpet flower,  
And rivaling, flashest forth thy bosom's  
dower,  
Poised on its brim, like a winged ecstasy;  
Through golden motes, like sundust, in  
the air,  
Where iridescent insects drone at noon,  
Eager thou plungest as their light to  
share,  
Listening the mystic measures they in-  
tune,  
Half bird, half flower, flame winged thou  
throbbest there,  
The passionate embodiment of June.

—C. E. Whiton-Stone.

## Mate of the "Lingering Breeze."

"The mail is aboard," said a stout, important man, "and here we are delayed. Is there nobody you can get, captain? How about your second mate? Can't you promote him?"

"I can't trust him," responded Captain Cammell. "He has only been with me one trip. I must have an experienced man. There may be squalls on the way, and putting in at Taiohai is no dream."

"What are we to do? What are we to do?" repeated the men in chorus. Captain Cammell paced the wharf with more than usual vehemence apparently thinking vigorously. The others debated the question among themselves. The mails were aboard, they argued; and even if their carrier was but an ordinary "wind-jammer," they owed it to the government to sail on time. Besides, the ebb tide was due, and unless the "Lingering Breeze" should get away from the wharf in a few minutes, she could not sail that day.

John T. Charming looked at the white sides of the pretty bark, and thought. "Why not?" he asked himself. "I've always been ready to tackle anything before, and I guess I can do it yet. I'm not going to stay around any longer; and if I don't know anything about sailing a ship, I shall before I've reached the end of the voyage. So, here goes!"

He sauntered up to Captain Cam-

mell in a careless manner, apparently fully at his ease. The skipper noticed his approach and the kindly smile that seemed to play on his face.

"Lookin' for a mate?" asked Charming.

"Yes, are you one?"

An assuring nod was the only reply. Overjoyed, the captain of the "Lingering Breeze" simply led the newcomer to the vessel and pushed him on the gang plank. "All right!" he shouted to the owners, "I've shipped one;" and, without further words, he gave orders to cast away.

When the ship was well away from the shore, Captain Cammell shouted to his new mate:

"Mr. Charming, let her go?"

The first mate was nonplussed. But the only thing it seemed necessary to let go, at that moment, was the tug. He knew it was his duty to obey the captain, but that was his limit of nautical knowledge. He raised his hand in the air and waved it wildly, in order to attract attention of the men on the tug and shouted:

"Hi, there, you steamboat—untie the rope!"

The sailors tittered audibly, and one was bold enough to remark, under his breath, that Charming must have been the mate of a freight train. The tug's crew were thrown into a sudden convulsion, and if their captain had been within hearing distance, he might have been heard to remark something about setting sail with a lunatic. As for Captain Cammell, he took the command with no little surprise, and the thought flashed through his brain that his new mate had a facetious turn of mind.

"Set the flyin' an' main jib, and spread your stays'ls!" shouted Captain Cammell.

Poor Charming looked blank. He should have reported the command to the men. Alas! he didn't know how. He simply told them in a half-whisper, to "go ahead and do it," and the amused sailors jumped to the hal-yards with more than usual alacrity. They knew the ropes and spars and sails, and the manner in which they should be operated, far better, perhaps, than they knew the English alphabet. They soon had the sheets fast, and, with the weather-beaten captain astern to guide the "Lingering Breeze" into the freshening wind, they were soon taut, and the good ship felt the new impulse.

"Fors'l, topgal'nt, main'n' port stuns'l!" shouted Captain Cammell from his post abaft the binnacle, as he turned to consult the compass. Charming simply said to the men, "Go ahead and do that—whatever it is"—and then he began to wonder if the sea has any effect on one's speech and if he could ever learn to understand such absolutely incomprehensible utterances.

Captain Cammell came forward. Charming saw him and started down the deck to meet him. He was just beginning to be overcome by that squeamish feeling that sets all land-lubbers awry; but he set himself against it, and the captain was, for the moment, none the wiser.

"I am going below to dinner," said the captain; "I wouldn't set any more sail in this wind, Mr. Charming. Let her lug along sou'west by sou', half sou', and, if the wind changes, let her go off two points. You'd better coil up the signal balyards and send a man up to put a new block on the main backstay. Then batten down the hatches. The second mate has gone below, and you can have the dog watch. To-morrow, at eight bells, we'll shoot the sun."

So saying, Captain Cammell disappeared down the companionway, where the savory carrot soup, and the tempting potted mutton, appeased his anxious appetite.

"Sou' sou' west! signal stay in back hall yard! dog's watch!" repeated John T. Charming again and again to himself. "As if any sane man could understand that rot! My, but this tug is rolling! If I could only get on a rock out there in the ocean; just one little—good-solid-rock-out-there, where-I-could—keep still for—a-awhile!"

The new mate was sprawling over the taffrail. But that was the least to his discredit. Many a sailor—aye, many an old captain, who has braved all manner of tempests through years of unremitting duty—has been seasick every time he has left port, and when Captain Cammell returned to the deck, and saw his chief officer's condition, he went up to him, and said, with a kindly spirit:

"Mr. Charming, you'd better go below. You'll be better to-morrow."

Nautical etiquette, even on the most humble trader, is a matter of much punctiliousness to the men who live on the sea, but the lingo of the deep is a detestable conglomeration of abbreviated terms calculated to disturb the peace of mind of all save old sailors. Captain Cammell might as well have told Charming to go above as to go below.

"Captain, I don't want to go below; I want to go to bed."

If Neptune and his trident had suddenly risen from the mystical depths of the Pacific, the skipper could not have been more puzzled. He could only look at Charming and wonder what on sea had possessed the man; what manner of witchcraft had turned his seemingly sober brain. Bewildered, awe-struck, and disappointed, Captain Cammell said, in a tone that was not without a goodly quota of gruffness and reproach: "Go to bed. I'll talk with you in the morning, sir."

Charming stumbled up the deck, rolling from side to side with the ship. He had noticed the bunks in the fore-castle where the sailors slept, and toward one of them he was directing his steps. What regard has a captain for a mate who bunks with the sailors, when his quarters are in the main cabin? This was the straw that broke the back of Captain Cammell.

Charming found the fore-castle, rolled into a bunk, and was soon asleep. The sailors, who had thus far obeyed him, pitied him with all their might and main. He was working out his own disgrace. They thought he was either an adventurer or a fool. Not one but pitied the sleeping man, the dare-devil of the western plains, who was then dreaming of his home in the Owl River mountains, where the cayuse sports in his wildtime glee, where the Indian summers by the cooling water of the hillsides, and the coyote, whose left legs are said to be shorter than his right ones, seeks scanty prey.

"Wilson," called Captain Cammell, on the following morning, "send Mr. Charming to me."

The second mate went to the fore-castle and delivered the order.

"Where does the captain of this 'seesaw' live, John?" asked the mate. "Below in the cabin, sir. Better take the aft companionway, sir."

"Now, look here," said Charming with firmness, "you may be a sailor, and I may be the mate of this bobbing bucket you call a ship, but it greatly behooves you to address me in good, plain American language, and not that stuff only you fellows can understand."

"Aye, aye, sir," said Wilson, as he jumped out on deck and pointed to the cabin entrance.

Charming ambled along, the most woe-begone specimen of manhood living—so he imagined. His hair was disheveled, his whole demeanor that of a miscreant. But he was not afraid to face his captain and give him word for word. He reached the companionway, but there his limited steadiness left him. Down the narrow stairway he tumbled, tripping up the cabin boy, who was starting to the galley with a load of empty dishes, and causing a shower of broken crockery to add a new impetus to the captain's anger.

"How do you feel, to-day?" asked Captain Cammell.

"Pretty bad, pretty bad," replied Charming, rubbing his head.

"I want to know whose mate you were before you came to me."

"Captain," said Charming, mustering up all his strength, "I must admit that the only mate I ever had was old Bill Sawyer, who was sheriff of Sleeping Vale, Wyoming, before the town burned down. Bill and I set out to tramp it to Oregon, but he got the

fever this side of Shoshone Junction, and I ain't seen him since."

"Do you mean to sit there and tell me that you have never been to sea before in your life?" thundered Cammell, with the rage of a lion.

"Captain, I do," answered the sorrowful man. "I wanted work Cap-tain—an' I took the first chance."

"Do you know that I can have you ironed for this—that I can take you back to America in chains, and send you to prison? Do you realize that you have jeopardized the lives and the cargo on this ship?"

The lubber sailor nodded, as if he had an idea of what the captain meant, which called forth a tirade of abuse, contumely, and contempt, from the lips of the skipper. The meeting resulted in Charming being discharged as first mate, and put in the position of a common scullion, with the cabin boy, a fresh youngster from a Liverpool wheat clipper, to act as his boss. The deposed mate felt his disgrace keenly. He was made to do the most trying of the many tasks aboard ship; he was made to work from sunrise until far beyond sunset; he was the butt of ridicule for all the crew, for he was the lowest man on the ship; he was glibed by the sailors; for the cabin boy, well—that globe-wandering Briton made him polish his boots every Sunday morning, and honored him with the stinging appellation of "my valet."

Nukahiva, the island for which the "Lingering Breeze" was heading, is the largest and most important of the Marquesas group, and Taiohai is its leading city, if two-score cocoanut-thatched houses, set on the rim of a half-moon bay, may be called a city. The entrance to the harbor is by a narrow strait between the rugged cliffs, which seem to step up and into the towering peaks of the mountains that rise majestically until they almost touch the clouds. When the wind blows from the land, it forms a series of circuitous currents, by coming in contact with these mountains, and travels, in sharp gusts, to the sea, making the bay a treacherous place for a sailing vessel.

With her sails nicely trimmed, the white bark bore down on the entrance until the wind came abeam and then her worthy captain turned her nose in the direction of Taiohai. Everything went well during the two long hours that it took to run abreast of the harbor. Just as the way seemed clear and the long voyage almost over, the treacherous wind suddenly veered, and, before the sailors could man the ropes, the "Lingering Breeze" began to drift toward the shore. All the quick action, the daring, the cat-like alacrity of the crew were without avail, for she had been caught by a swift current which, aided by the playful winds blowing at variance to any given point of the compass, carried her upon the rocks. Captain Cammell's hands were uplifted toward heaven in a mute appeal as he felt and heard the keel of his only pet in life, his home, his ambition, his beloved white bark, grate against the cruel rocks. But it was all too true. The stanch old boat was in a precarious condition. Nothing could save her but some vessel propelled by steam to pull her off. The captain was a man of quick action, and had been sufficiently long at sea to keep a cool head in moments of danger, but he took time to say that some "hoodoo" had sailed with the ship, and John T. Charming was brought out from his sedentary duties in the galley to be made the butt of his captain's wrath and indignation. Then all the members of the crew were commanded to appear before him, and he said, shaking his clenched fist to add emphasis to his words:

"One of you must volunteer to swim ashore to-night, and if there is a steamer in that harbor, ask her captain to come out and pull us off. Who will go? It is a good two miles."

The crew looked amazed for a minute. But they had lost all their boats in a hurricane two weeks before. Captain Cammell was staring into their blank and wondering faces, with a suppressed curse on his lips, when a clear voice spoke the words, "I will."

It was the voice of John T. Charm-



ing. Before the skipper had time to recover from the shock the disgraced mate was standing on the taffrail divesting himself of his unnecessary clothing. In another instant he had plunged into the deep. The darkness enveloped him, and a splash was all that told he had struck water.

"Make for the shore to your right; then follow the beach! Look out for sharks!" cried the captain, as he rushed to the taffrail. Then a muffled "Aye, aye, sir!" came up from the depths. Poor John had learned, at least, how to answer in true nautical style. Vainly those on deck peered over the side to catch a glimpse of him, but the favoring moon was temporarily hidden behind a mountain peak, and its shadows made the waters of the bay as black as the storied Styx. Those aboard could only wait and hope and listen to the weird grating, as the bark, now and then, rubbed against the rocks; but Charming swam on and on, now "side-stroke," now "overhand," plunging, forcing every muscle to its utmost, muttering to himself that he would show that captain that he could do something, and wondering if his strength would hold out until he could reach shore. A tiny light told him that something was anchored in the harbor, and he struck out in its direction, although the distance was much greater. But the harder he swam the further away it seemed. At length his strength began to fail. Once he sank from sheer exhaustion, but he managed to get on his back so that he could float until his vigor returned. Then he struck out again. The light grew larger and brighter, and he could discern the outlines of a vessel. This seemed to give him new strength, and he kept on with increasing energy until he found himself within hailing distance. He tried to cry out, but his voice had gone. He swam close to the vessel, but the gang-plank was drawn up, and there was no way of getting aboard. Finally a man walked up the deck, and Charming called out faintly. It was a sailor. He heard the cry, but answered in the French tongue, which the American could not understand. The craft was the little French steamer "Tahitiennne," which plied between the islands of the group; and her crew, quickly aroused by the lone sailor, threw a rope to the swimmer, which he caught in a dying struggle, and wound around his body. Then they dragged him from the sea to the steamer's deck. He fell exhausted and a man ran for stimulants. Charming slowly revived and muttered: "Out—there—she's—sinking."

But none of the Frenchmen understood, and Charming struggled to his feet, and, with a wild gesticulation, pointed to the entrance of the harbor, and—fell to the deck, apparently lifeless.

"There's something the matter out there," said Captain Martineau of the "Tahitiennne." Losing no time, he weighed anchor, and in fifteen minutes was by the side of the "Lingering Breeze." A hawser was made fast to the stern bits of the bark, and she was towed to safety in the harbor.

There's a grave in the little French cemetery at Taiohai, and on the tombstone that is shaded from the tropic sun by the wide, green leaves of a spreading palm, is this inscription:

JOHN T. CHARMING,  
AGE 40,  
AN AMERICAN HERO.

"If I'd only had a chance to thank him!" always exclaims Captain Cammell, with a suspicious moisture in his eyes, as he finishes this story of his untutored but brave and kind-hearted first mate.—Success.

Jones, like a fool, had poked his nose 'Twixt man and wife—and got the blows. Quoth Jones: "It has been truly said Fools rush in where angels fear to tread."  
—Chicago Daily News.

#### Mosquito Remedies.

The best way to get rid of the nuisance of mosquitos is to abolish their breeding places by draining the pools, puddles, sinks and ponds in one's neighborhood. When this is impracticable, the resource remains of treating the pools, puddles, sinks, etc., with kerosene. A pamphlet, by L. O. Howard, Ph. D., published by the Department of Agriculture, entitled "Notes on the Mosquitos of the United States," lays it down very positively that kerosene or crude petroleum is a sovereign remedy for these pests. The use of kerosene rests on the fact that the larvæ must every few minutes come to the surface of the water in which they swim to get a breath of air. If they find oil on the surface they get that into their breathing apparatus and it is immediately fatal to them. About one ounce of kerosene suffices for 15 square feet of surface and an application suffices for one month.

The heavy grade of oil known as lubricating oil is found to be more persistent than the ordinary illuminating oils. Oil when placed on the water spreads itself evenly, and will make the area it covers uninhabitable to mosquitos.

The places in which the oil is most needed are not so much the few ponds and swamps outside cities and towns, as the thousands of wells, which, in the absence of sewers, are found in the back yards of city residences. It is from these that the swarms of mosquitos emerge that make life a burden to the citizen during the summer and fall.

To destroy mosquitos in houses Dr. Howard prescribes the burning of pyrethrum powder or the use of kerosene cups. The powder should be moistened and molded into small cones, about the size of chocolate drops, dried in an oven. Then, if ignited at the apex, the cones smolder slowly, giving off an odor not unlike that of the prepared punk which boys use in setting off firecrackers. Two or three of these cones burned in a room in the evening will give relief by stupefying the mosquitos. The smoke is not harmful at all to human beings. A small quantity of kerosene put into a tin box, lid fastened to the end of a stick, may be pushed up to the ceiling under resting mosquitos and they will fall into the oil and be destroyed. It is the custom in certain houses in New Jersey to systematically hunt for mosquitos in the bedrooms with a cup on a long stick before retiring.

Camphor rubbed on the face and hands or a few drops upon the pillow at night will keep mosquitos away for a time. This is also a well-known property of oil of pennyroyal.

For mosquito bites glycerine is a sovereign cure; indigo rubbed on the bite will also remove the sting. Indigo, it is also said, will give relief from the stings of the yellow jacket. Household ammonia has been found by many persons to give relief from mosquito bites.

#### Coffee.

A coffee man who has spent thirty years in the business says he cannot tell samples of coffee varying in price one from another. That, in the main, a poor grade of coffee well and carefully made will give better results than a good grade of coffee indifferently steeped.

With a good many cooks "coffee boiled is coffee spoiled," and in the leading restaurants the "drip" pots with the Irish linen bags are used.

To each quart of hard boiling water add one and one-half ounces of ground coffee. Pour the water through the coffee until the infusion is of the requisite strength, keeping the infusion just to the verge of boiling, but not beyond. Within seven minutes take the cylinder and bag out of the coffee and for three to five minutes keep the coffee to the verge of boiling. Then serve at once.

There are those who do not like drip coffee at home, who like the white of egg stirred in the coffee and the infusion brought to the boiling point. In

all restaurants and hotels, however, the French coffee is served. The person who is fastidious in his tastes would find better results to-day if he had his coffee carefully browned at home in small quantities, just as he used it. There are just two reasons for the drinking of coffee. Perhaps the chief of these is the subtle flavor of the aroma. Following this comes the stimulating after-effect of the caffeine.

It is said that a person needing a cup of coffee gets a more pronounced and lasting stimulant from the coffee than would a drinker from one drink of whiskey. Unlike alcohol, caffeine is easily digestible.

There is no appreciable food value in a cup of coffee. The cream that goes into it is all right and is not affected in nutritive value by the mixing.

Tannic acid is the thing to be avoided in coffee making. Boiling extracts it, or too long submersion in hot water. The tannic acid is the bitter quality and is undesirable in every way.

The extent to which the people of the United States are interested in the general subject of coffee may be gathered from the estimated importations of 550,000,000 pounds annually, a consumption of nearly eight pounds to each person in the country. As compared to this abroad, however, Holland consumes twenty-one pounds per capita, Denmark 13.89, Belgium 13.48 and Great Britain only one pound.

As an article of commerce, the history of the coffee berry is pretty well known. The berry is the seed of a small cherry growing upon a tropical plant first found wild on the plains of Abyssinia. The Dutch East Indies made the first experiments outside of Arabia in 1690, when the Island of Java was selected as an experimental field. Since that time coffee culture has spread to the tropics of nearly every part of the civilized world.

The coffee cherry is first deprived of its pulp by a washing process, which leaves the double coffee berry in a husk. When the husk is dried it is cracked by machinery and the grains separated. These grains afterward are sized by passing through screens and put in bags for marketing.

#### Variety in Bread.

One of the most important facts about our relish of food, says The American Kitchen Magazine, is its dependence upon a certain variety of flavors. Dyspepsia has been produced by the constant use of the same foods cooked in the same way, and has been cured by the mere adoption of a more varied diet. There is danger in pampering the appetite, of course, and surfeiting it with variety, but this lies principally in the pastry cook's department. A variety of breads is much less dangerous than a variety of pies and sweets. The old Southern fashion of five daily breads for the table was a much more healthful one than the Northern fashion of unlimited cakes and pies. That number of breads is, however, excessive. One may need five breads during a month, but certainly not at any one meal.

Besides the many kinds of bread to be secured by the use of the different grades and varieties of wheat flour—spring and winter, high-grade and low-grade, whole wheat, graham, etc.—there are corn breads, rye breads, barley breads and breads made from mixture of corn, rye, wheat, barley, etc. Having, then, an almost unlimited variety of breads to choose from, and bearing in mind what bread should yield to a well-considered dietary, we certainly should be unwise not to make our breads contribute, so far as possible, not only to the nourishment of the body, but also to the promotion of good health in the correction of such minor derangements of the system as may be reached by a judicious selection. A variety of perfect breads, not only breads with various flavors, but of different kinds, containing different amounts of those substances found in the wheat, would serve better than a thousand doctors to keep our country people in sound health.

### DOMESTIC ECONOMY.

#### Hints to Housekeepers.

Soft, mild cheese is used in making a Welsh sandwich, which is an appetizing accompaniment to a green salad. Two parts of the cheese are rubbed together with one part of butter, the former having first been flavored with mustard and an herb vinegar. The mixture is spread between thin slices of bread.

A small cracker, called soup biscuit, is often served with soup. Grisini, an Italian breadstuff, resembling coarse macaroni, is also served with soups. Imperial sticks—strips of buttered bread toasted until crisp and brown—are also used, or a roll with crisp crust is placed upon the napkin when the cover or place is laid.

It is not so often poor gas, as commonly alleged, that is the cause of a dim light as poor burners. The lava or metal tips of gas fixtures, particularly the former, become clogged quite readily, and at once affect the size and quality of the flame. As these tips are very inexpensive, costing only a few cents, it is always worth while to experiment with their renewal before complaining of the quality of the gas.

Here is a dressing for ripe fruits, peaches, bananas, pears, fresh figs—if one can get them—or other varieties of fruit. Take almonds, sweet and bitter, and to every dozen of the former add four of the latter. Blanch, remove the skins, and put to soak in cold water for two hours. Pound in a porcelain or marble mortar with a little salt, a bit of cayenne pepper and a little lemon juice. When the mixture is ground fine it must be thinned to the consistency of a cream with sherry. Fresh cream can be added, if desired, just before the salad is served, being well stirred in.

An arrangement to cool a sick room in summer weather is a modification of the use of a wet sheet, often suspended in an open window to cool the inside air. In the new way the sheet is hung up at the window dry, and is kept moist by the application of the siphon system. Near the window, and pretty well up on any convenient shelf or place, stands a small pitcher which must be kept full of water. From this to the floor close to the sheet goes a thick soft cord, or a wick, or a strip of the sheeting—anything, in fact, that will serve to siphon the water to the sheet.

Most fruit stains can be easily removed by holding the stained portion over a vessel and pouring boiled water directly through it. This is a much better method than soaking the article, as it prevents the stain from spreading. Another way is to rub the stain with alcohol before putting it into water, and still another is to apply a little salts of lemon, letting it stand for a few hours, when it should be washed off in clear water. This is an excellent recipe for the removal of ink spots, though in all cases the stain will yield more readily to treatment if it be taken in hand as soon as it is made. Grass stains may be removed by rubbing with alcohol, and iron rust by immersion in a hot solution of oxalic acid, following by rinsing in ammonia water.

**BROWN BREAD.**—Two pounds of graham flour, two pounds of wheat (white) flour, one coffeecupful of molasses, one tablespoonful of salt, one cake of yeast, dissolved in cold water, about one quart and a pint of lukewarm water. Mix the graham and white flour thoroughly; do not sift the graham flour. Make a hole in the heap of mixed flour, pour in the molasses, and on top of that the lukewarm water. Stir well with a large spoon; do not use the hand. Pour in the dissolved yeast, continue to stir until all the ingredients are well mixed. Cover closely. Keep in a warm room over night. In the morning divide into three loaves. Put the loaves into greased pans. Let the pans stand one hour, then bake in a moderately hot oven from one and three-quarters to two hours, and it will be ready for use.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Sept. 11, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	70 1/2 @ 71 1/2	74 1/2 @ 75
Thursday.....	71 1/2 @ 71 3/4	74 3/4 @ 75 1/4
Friday.....	71 1/2 @ 71 3/4	75 1/4 @ 74 3/4
Saturday.....	71 @ 70 3/4	74 3/4 @ 73 3/4
Monday.....	70 3/4 @ 71	74 @ 73 3/4
Tuesday.....	70 3/4 @ 70 3/4	74 3/4 @ 74

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	34 1/2 @ 35	36 1/2 @ 37 1/4
Thursday.....	34 1/2 @ 35 1/4	37 1/4 @ 37 3/4
Friday.....	35 1/4 @ 35 1/2	38 @ 37 1/2
Saturday.....	35 1/2 @ 34 3/4	37 1/2 @ 37 1/4
Monday.....	35 1/4 @ 35	37 1/4 @ 37 1/4
Tuesday.....	35 1/2 @ 34 1/2	37 1/2 @ 37 1/4

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 00 1/2 @ 1 00 3/4	1 04 1/2 @ 1 04 3/4
Friday.....	1 00 1/2 @ 1 00 3/4	—
Saturday.....	1 00 @ 1 00 1/4	—
Monday.....	—	—
Tuesday.....	1 00 1/2 @ —	1 04 @ —
Wednesday.....	1 00 1/2 @ —	—

\*Holiday.

## WHEAT.

The market has shown a generally weak tone since issue of last report, foreign and Eastern markets inclining against the selling interest most of the time under review. Quotable rates or the views of holders in this center were without marked or noteworthy change, but demand was exceedingly slow, and to have effected free transfers, or sales of wheat in round lots, concessions to buyers would have been necessary. The movement outward is showing a little improvement, but is still light and far from what it should be, considering the quantity of wheat available and the amount of engaged tonnage now here. Freight remain on a tolerably high plane, to the detriment of wheat. Desirable iron ships are difficult to secure for carrying wheat cargo at less than £1, 18s. 9d. to Cork for orders, usual option as to final destination. If wheat could be run by canal across the Isthmus, saving the long trip around the Horn, and the expense attached thereto, our growers would be able to more successfully compete with the outside world in the production of this cereal, but until such time as we have a canal, there is little or no prospect of the wheat industry on this coast proving especially profitable.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.00 1/2 @ 1.00.  
May, 1902, delivery, \$1.04 1/2 @ 1.04.  
Wednesday, at regular noon session of Call Board for December, 1901, wheat, \$1.00 1/2 was bid, \$1.00 1/4 asked; May, 1902, \$1.04 1/2 bid.

California Milling.....	\$1 00 @ 1 05
Cal. No. 1 shipping, alongside.....	96 1/4 @ 98 3/4
Oregon Valley.....	97 1/4 @ 1 02 1/2
Washington Blue Stem.....	1 00 @ 1 05
Washington Club.....	97 1/4 @ 1 00
Of qualities wheat.....	95 @ 97 1/2

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s 1 1/4 d @ 6s 5 d	5s 11 1/4 d @ 6s 0 d
Freight rates.....	40 @ —	37 1/2 @ 38 3/4 s
Local market.....	\$1 05 @ 1 06 1/4	96 1/4 @ 97 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Shipments of very fair proportions are being made to the Orient and to South American countries, but there is no scarcity of supplies, and the market is easy in tone at quotably unchanged values. Wholesale transfers at full current figures are the exception, especially of other than the most favorite marks.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

Several clearances of barley have been made from this point since last review. The British steamer Oak Branch, bound to St. Vincent for orders, took 4850 tons of this cereal. The German ship Wandshbek, clearing for Leith, Scotland, carried

2900 tons. Another cargo of 2900 tons went to Europe. About 35,000 tons of barley has gone outward by sea since the opening of current season, being close to aggregate for corresponding period of previous year. This year's exports up to date would have made a much larger showing, but for the labor troubles recently experienced. There is more barley available for shipment this season than last and no absence of foreign demand. Values are being fairly well maintained at prevailing rates, especially for brewing and export grades. Demand for feed descriptions is not brisk.

Feed, No. 1 to choice.....	72 1/2 @ 75
Feed, fair to good.....	70 @ 72 1/2
Brewing, No. 1 to choice.....	77 1/2 @ 83 1/2
Chevalier, No. 1 to choice.....	1 00 @ 1 05
Chevalier, poor to fair.....	75 @ 90

## OATS.

Asking figures or the views of holders have not changed materially since last issue, but the market has presented an easy tone. Buyers are delaying purchases as much as possible, expecting free arrivals from Oregon and Washington at an early day, and hoping to be able to operate to better advantage than at present.

White Oats, fancy feed.....	1 20 @ 1 25
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 17 1/2
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 22 1/2 @ 1 30
Black Russian.....	85 @ 1 15
Red.....	95 @ 1 25

## CORN.

Hardly enough offering of any description to warrant giving quotations. Market is naturally unfavorable to buyers, and that it will so continue for some time to come seems now altogether probable.

Large White, good to choice.....	1 70 @ 1 75
Large Yellow.....	1 65 @ 1 70
Small Yellow.....	1 75 @ —
Eastern, in bulk (carload lots).....	1 60 @ 1 65

## RYE.

Market remains quiet, with offerings of fair proportions and no quotable improvement to record in values.

Good to choice, new.....	77 1/2 @ 80
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## BUCKWHEAT.

There is very little of this cereal now on the market or being offered to arrive. Quotations for the present are based mainly on the views of buyers.

Good to choice.....	1 45 @ 1 60
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## BEANS.

Buyers are awaiting more liberal arrivals of new crop before attempting to purchase in anything like wholesale fashion. Supplies of old beans have been reduced to quite small proportions, and spot stocks of new, mainly Lady Washingtons and Black-eyes, are still of very moderate volume. Prices for new are not yet clearly defined. Dealers expect to buy under quotations, but there is nothing to warrant anticipating the ability of buyers to get values down to very low levels, unless undue haste and selling pressure on the part of growers are exerted.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 90 @ 5 00
Lady Washington.....	2 75 @ 3 00
Pinks.....	2 40 @ 2 50
Bayos, good to choice.....	3 00 @ 3 25
Reds.....	3 00 @ 3 25
Red Kidney.....	4 00 @ 4 25
Limas, good to choice.....	6 40 @ 6 50
Black-eye Beans.....	3 00 @ 3 25
Garhanzos, large.....	2 00 @ 2 25
Garhanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

Scarcely anything doing in this line, values remaining nominally quotable as last noted. Choice Green are being in the main firmly held. Tendency of the market for Niles peas is rather favorable to the buying interest.

Green Peas, California.....	2 25 @ 2 50
Niles Peas.....	1 50 @ 1 75

## WOOL.

There would be considerable business if the better grades of Fall wool were here in sufficient quantity to admit of wholesale operations. Not much wool of any sort is now offering in local warehouses from first hands, and especially are fine free wools in exceedingly limited spot stocks. Free Fall wools are inquired for at full current rates, the market being firm at the quotations, with prospects that current clip will speedily pass into second hands.

## SPRING.

Humboldt and Mendocino.....	14 @ 16
Humboldt and Mendocino Lambs.....	11 @ —
Southern, defective, 7 mos.....	7 @ —
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Mountain, free.....	9 @ 11
San Joaquin and Plains.....	6 1/2 @ 8
San Joaquin Lambs.....	7 @ 9

## HOPS.

New hops have arrived to the extent of several hundred hales, but beyond some deliveries on contracts, nothing of consequence has yet been done in the way of transfers. Dealers and growers continue too far apart in their views to make prospects encouraging for any great activity in the near future. Many growers are expecting 15c. for choice, while dealers talk as low as 10c. Some who are connected with the trade but are carrying no hops, venture the opinion that the market for good to choice will open within range of the figures below quoted as representing nominal values at this date.

Good to choice 1901 crop.....	11 @ 13
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## HAY AND STRAW.

While hay is not coming forward in heavy quantity for this time of year, the arrivals are about as large as can be conveniently or profitably placed, especially of other than most select qualities. Market for choice to select Wheat and fine Alfalfa hay is firm at the quotations, and bids fair to continue in sellers' favor, but for the more common grades of stable hay the market shows weakness, with prospects of prices for the latter continuing at a low range.

Wheat, good to choice.....	7 50 @ 10 50
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 50 @ 9 00
Alfalfa.....	8 50 @ 10 50
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 3/4 bale.....	25 @ 40

## MILLSTUFFS.

Bran and Middlings are in much the same scanty supply as for some weeks past, and values remain at a high range. Values for Rolled Barley and Milled Corn have ruled decidedly steady.

Bran, 3/4 ton.....	20 00 @ 21 00
Middlings.....	21 50 @ 23 00
Shorts, Oregon.....	20 00 @ 22 00
Barley, Rolled.....	17 00 @ 17 50
Cornmeal.....	33 00 @ —
Cracked Corn.....	34 00 @ —

## SEEDS.

Spot stocks are too light to admit of any wholesale operations. The little business doing in the kinds quoted herewith is at generally unchanged values.

	Per ctt.
Flax.....	2 50 @ 3 00
	Per lb.
Canary.....	3 1/4 @ 3 1/2
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

## BAGS AND BAGGING.

There are no changes to report in quotable rates for bags and bagging of any description. Little now doing in this department, as is to be expected at this date.

Calcutta Grain Bags, spot.....	7 1/2 @ 8 1/2
San Francisco Grain Bags, 22x36, spot.....	7 1/2 @ 8
Wool Sacks, 4 lbs.....	3 1/2 @ 3 3/4
Wool Sacks, 3 1/2 lbs.....	3 1/2 @ 3 3/4
Fleece Twine.....	8 1/2 @ —
Gunnies.....	— @ —
Bean Bags.....	5 1/4 @ 5 1/2
Fruit Sacks, cotton, three sizes.....	5 1/4, 6, 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/2

## HIDES, PELTS AND TALLOW.

Heavy Hides Salted are meeting with improved demand and market for this description is showing a firmer tone, but in other respects the situation remains to all intents and purposes as last noted. Pelts are not in very urgent request at full current figures. Demand for Tallow at prevailing values is fully up to the supply.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/2 @ —	9 @ —
Medium Steers, 48 to 56 lbs.....	9 1/2 @ —	8 @ —
Light Steers, under 48 lbs.....	8 1/2 @ 9	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	8 1/2 @ 9	8 @ —
Wet Salted Kip.....	9 @ —	8 @ —
Wet Salted Veal.....	9 @ —	8 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	16 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	— @ —
Salted Horse Hides, medium.....	2 00 @ —	— @ —
Salted Horse Hides, small.....	1 00 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 00 @ —	1 @ 25
Dry Colts' Hides.....	50 @ —	— @ —
Pelts, long wool, 3/4 skin.....	75 @ 1 00	— @ —
Pelts, medium, 3/4 skin.....	50 @ 75	— @ —
Pelts, short wool, 3/4 skin.....	30 @ 40	— @ —
Pelts, shearing, 3/4 skin.....	10 @ 25	— @ —
Deer Skins, best summer.....	35 @ —	— @ —
Deer Skins, good medium.....	— @ 30	— @ —
Deer Skins, thin winter.....	— @ 10	— @ —
Elk Hides.....	10 @ 12	— @ —
Tallow, good quality.....	4 1/2 @ 4 1/2	4 @ 4 1/2
Tallow, No. 2.....	3 1/2 @ 4	— @ —
Goat Skins, perfect.....	30 @ 37 1/2	— @ —
Goat Skins, damaged.....	10 @ 20	— @ —
Kid Skins.....	5 @ 10	— @ —

## HONEY.

There are no heavy quantities in store in this center, but there are reports of con-

siderable honey offering in the interior on basis of about 4c. for Light Amber f. o. b. at points of production. A more than ordinarily light proportion of this year's honey is offering in the shape of Comb. The latter has to be white to draw forth special attention from buyers or to command what can be termed firm figures.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/4 @ —
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7 1/2

## BEESWAX.

Market continues to be very lightly stocked, values remaining quotably as heretofore.

Good to choice, light, 3/4 lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Beef is ruling quiet at same range of values last quoted, there being a generally easy tone to the market. Mutton is selling at quotably unchanged values, but a little more than is offering could be accommodated with immediate demand at full figures. Both Veal and Lamb are in quite moderate receipt, but in the matter of prices obtainable there is no improvement to record. Hog market was tolerably steady, and is not apt to show any material difference in the near future, although some dealers expect a decline of about 1/2c. the coming week.

Beef, first quality, dressed, net 3/4 lb.....	6 @ 6 1/2
Beef, second quality.....	6 @ —
Beef, third quality.....	5 1/2 @ —
Mutton—ewes, 6 @ 7c; wethers.....	7 @ —
Hogs, hard grain fed, medium.....	6 @ 6 1/2
Hogs, small, fat.....	6 @ 6 1/2
Hogs, large, hard.....	5 1/2 @ 5 3/4
Hogs, country dressed.....	7 1/4 @ 7 1/2
Veal, small, 3/4 lb.....	8 @ 10
Veal, large, 3/4 lb.....	8 @ 8 1/2
Lamb, spring, 3/4 lb.....	7 1/2 @ 8

## POULTRY.

Most attention was given to Chickens in fine condition, and desirable young and old brought better average prices than had been ruling. Many of the Hens arriving were small and poor, and such had to go at low figures, being wholly neglected by most buyers. Extra large and fat Hens brought above quotations.

Old Turkeys, live hens, 3/4 lb.....	12 @ 14
Old Turkeys, live gobblers, 3/4 lb.....	9 @ 10
Young Turkeys, full grown.....	17 @ 20
Hens, California, 3/4 dozen.....	3 50 @ 5 50
Roosters, old.....	3 50 @ 4 50
Roosters, young (full-grown).....	4 00 @ 5 00
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 50 @ 3 00
Ducks, old, 3/4 dozen.....	3 00 @ 3 50
Ducks, young, 3/4 dozen.....	3 50 @ 4 00
Geese, 3/4 pair.....	1 50 @ 1 75
Goslings, 3/4 pair.....	1 50 @ 1 75
Pigeons, old, 3/4 dozen.....	1 25 @ 1 50
Pigeons, young.....	1 25 @ 1 50

## BUTTER.

Quotable values for fresh product have been at a lower range than during preceding week, and for other than most select the market has been weak at the reduced rates. Choice to fancy was about a cent lower, but on the more common grades still greater cuts had to be made in some instances to effect sales. Stocks of cold storage are heavy and a large percentage of the trade has been diverted to this butter.

Creamery, extras, 3/4 lb.....	25 @ —
Creamery, firsts.....	21 @ 22
Creamery, seconds.....	20 @ 21
Dairy, select.....	22 @ —
Dairy, firsts.....	19 @ 20
Dairy, seconds.....	18 @ —
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll, 3/4 lb.....	19 @ 20
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/2

## CHEESE.

Market is moderately firm at prevailing values, more due to limited offerings than to any active wholesale inquiry at full current figures. Business at present is mostly of a light jobbing character. No heavy quantities of Eastern offering, and values for the same are ruling steady.

California, fancy flat, new.....	11 @ —
California, good to choice.....	10 @ 10 1/2
California, fair to good.....	9 1/2 @ 10
California Cheddar.....	— @ —
California, "Young Americas".....	11 1/2 @ 12

## EGGS.

Choice to select fresh are arriving sparingly and are being favored with a rather firm market, some favorite marks selling in a small way to special custom a little higher than best figures warranted as a regular quotation. Where all kinds of eggs are mixed together, they do not meet with special attention and have to be sold at much the same figures as cold storage stock. Eggs of latter sort continue in heavy supply.

California, select, large, white and fresh.....	31 @ —
California, select, irregular color & size.....	27 @ 29
California, good to choice store.....	23 @ 25
Eastern, good to choice.....	19 @ 21
Cold Storage.....	19 @ 21



VEGETABLES.

The demand for Onions has shown a marked falling off, both on Australian and Eastern account, and the market is in consequence easier. It is probable that Eastern shipments will be resumed at an early date. Green Corn was in liberal receipt and market favorable to buyers. Tomatoes arrived quite freely, giving canners an opportunity to purchase at low figures. Other vegetables now arriving in quotable quantity went at much the same prices as previous week.

Asparagus, $\frac{1}{2}$ box.....	— @ —
Beans, String, $\frac{1}{2}$ lb.....	1 $\frac{1}{2}$ @ 2 $\frac{1}{2}$
Beans, Lima, $\frac{1}{2}$ lb.....	2 $\frac{1}{2}$ @ 3 $\frac{1}{2}$
Beans, Wax, $\frac{1}{2}$ lb.....	— @ —
Cabbage, choice garden, $\frac{1}{2}$ 100 lbs...	55 @ 65
Cauliflower, $\frac{1}{2}$ dozen.....	40 @ 50
Corn, Green, $\frac{1}{2}$ sack.....	30 @ 65
Corn, Green, Alameda, $\frac{1}{2}$ large crate.	75 @ 1 00
Cucumbers, Bay, $\frac{1}{2}$ large box.....	25 @ 40
Egg Plant, $\frac{1}{2}$ box.....	35 @ 50
Garlic, $\frac{1}{2}$ lb.....	2 @ 3
Okra, Green, $\frac{1}{2}$ box.....	50 @ 65
Onions, Yellow Danver, $\frac{1}{2}$ cental....	1 00 @ 1 15
Peas, Sweet garden, $\frac{1}{2}$ lb.....	2 @ 2 $\frac{1}{2}$
Peas, good to choice, $\frac{1}{2}$ sack.....	— @ —
Peppers, Green Chile, $\frac{1}{2}$ sack.....	30 @ 50
Peppers, Bell, $\frac{1}{2}$ box.....	40 @ 60
Squash Summer, $\frac{1}{2}$ small box.....	25 @ 40
Summer Squash, Bay, $\frac{1}{2}$ large box..	50 @ 75
Tomatoes, $\frac{1}{2}$ large box.....	25 @ 60
Tomatoes, $\frac{1}{2}$ small box.....	15 @ 30

POTATOES.

There was a decided dropping off in orders the past week from Eastern points, as other sections, notably Oregon, Colorado and Michigan, are furnishing potatoes at relatively lower figures than have been lately current here. While the market is lower, it is believed prices will not have to drop much below present levels to again attract orders from the East. In fact, at the close some shipments were being again made Eastward.

Burbanks, Salinas, $\frac{1}{2}$ 100 lbs.....	1 40 @ 1 65
San Leandro, in sacks, $\frac{1}{2}$ cental....	1 30 @ 1 50
River Burbanks in sacks, $\frac{1}{2}$ cental..	90 @ 1 15
Mission Garnet Chile, in sacks.....	1 00 @ 1 30
Sweets, new, $\frac{1}{2}$ cental.....	40 @ 75

The Fruit Market.

FRESH FRUITS.

The market for fresh fruits was as a whole hardly so active as for several weeks preceding, but it was the exception where values for strictly choice to select fruit ruled less favorably to the producer and seller. Low grade fruit dragged at low figures, as it invariably does, regardless of the quantity offering, very few buyers caring to handle such stock, and those who do take hold, purchase this common fruit much as dealers buy junk, because they get it at their own price. The canners were less active operators, getting on contracts most of the fruit they required. Peaches of select quality, however, particularly high grade Clings, did not lack for custom and brought about as good figures as previously quoted. Bartlett pears have about had their run for the season, at least so far as the canning trade is concerned, and are hardly quotable any longer in a wholesale way. Plums show reduced receipt, both in bulk lots and in free boxes, and while the market is moderately firm for desirable offerings, no particular improvement has been effected in quotable rates. Values for Apples of prime to choice quality ruled decidedly steady, with no glut of offerings of this sort and not likely to be the current season. Pomegranates were in fair receipt, with demand for this fruit limited. Table grapes were in fairly liberal supply and inclined in favor of the consumer, especially for other than Seedless, the latter being most in favor. A few White Cornichon arrived, the first of the season, and were held at \$1@1.25 per crate. Wine grapes were offered sparingly, but the local inquiry for them being mainly from Italian and a few French and Spanish families, not many are likely to be required at current rates. Melons were in improved request and brought generally better figures than had been ruling. Berries in season were not plentiful, but prices continued much the same as last quoted.

Apples, Gravenstein, $\frac{1}{2}$ 4-ter box...	90 @ 1 25
Apples, Alexander, $\frac{1}{2}$ 50-lb. box.....	50 @ 1 00
Apples, Bellefleur, $\frac{1}{2}$ 50-lb box.....	50 @ 85
Apples, green, $\frac{1}{2}$ 50-lb box.....	35 @ 60
Blackberries, $\frac{1}{2}$ chest.....	3 50 @ 5 00
Cantaloupes, $\frac{1}{2}$ crate.....	65 @ 1 25
Figs, 2-layer box.....	40 @ 75
Grapes, Seedless, $\frac{1}{2}$ crate.....	65 @ 90
Grapes, Cornichon, $\frac{1}{2}$ crate.....	1 00 @ 1 25
Grapes, Black, $\frac{1}{2}$ crate.....	30 @ 60
Grapes, Fontainebleau, $\frac{1}{2}$ crate.....	30 @ 60
Grapes, Muscat, $\frac{1}{2}$ crate.....	30 @ 60
Grapes, Tokay, $\frac{1}{2}$ crate.....	30 @ 60
Grapes, Zinfandel, $\frac{1}{2}$ ton.....	24 00 @ 28 00
Logan Berries, $\frac{1}{2}$ chest.....	— @ —
Nutmeg Melons, $\frac{1}{2}$ crate.....	30 @ 65
Peaches, $\frac{1}{2}$ box.....	30 @ 65
Peaches, Freestone, $\frac{1}{2}$ ton.....	20 00 @ 30 00
Peaches, good to choice Cling, $\frac{1}{2}$ ton	35 00 @ 45 00
Pears, Bartlett, $\frac{1}{2}$ 40-lb. box.....	50 @ 1 25
Pears, other kinds, $\frac{1}{2}$ box.....	40 @ 75
Plums, large size, $\frac{1}{2}$ ton.....	20 00 @ 22 50
Plums, $\frac{1}{2}$ crate.....	40 @ 75

Pomegranates, $\frac{1}{2}$ box.....	75 @ 1 00
Prunes, $\frac{1}{2}$ crate.....	40 @ 75
Quinces, $\frac{1}{2}$ box.....	40 @ 65
Raspberries, $\frac{1}{2}$ chest.....	6 00 @ 7 00
Strawberries, Longworth, $\frac{1}{2}$ chest..	6 00 @ 7 50
Strawberries, Large, $\frac{1}{2}$ chest.....	4 00 @ 5 00
Watermelons, $\frac{1}{2}$ 100.....	5 00 @ 20 00
Whortleberries, $\frac{1}{2}$ lb.....	6 @ 8

DRIED FRUITS.

The market for cured and evaporated fruits is not especially noteworthy for activity, although there is considerable doing, more particularly in the filling of shipping orders from stocks in second hands. Most of the wholesale dealers in this center have been kept tolerably busy the current week in getting shipments under way, in response to directions by telegram or cable. While there was no special rush on the part of large handlers to purchase offerings from producers, samples submitted for inspection were not as a rule neglected, and desirable qualities in most instances brought forth bids fully up to the best figures lately current. Apples are reported less buoyant in Eastern centers, but values here are steady, and there is nothing to warrant anticipating materially lower prices this season. Pears are being offered in moderate quantity, and while market for this fruit is a little easier in tone, there is no decline to record in quotable values, and none of consequence likely to be experienced, especially on choice stock. Apricots are quiet but steady. Peaches are moving at generally unchanged values, with the quality of most offerings this season showing high average. Of the Plums being dried this summer there appear to be more Reds than any other variety. As between Red and Black Plums, the preference of most parties has for some time past been accorded the first named, especially at the same price. Prunes of new crop are moving to some extent, mainly on basis of 3@3 $\frac{1}{2}$ c. for the four sizes, outside figure being for Santa Claras. For small Prunes, running into three figures before tipping the pound scale, 2c. is being paid.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 $\frac{1}{2}$ @ 8
Apricots, Royal, choice, in sacks, $\frac{1}{2}$ lb..	9 @ 10
Apricots, Moorpark.....	10 @ 13
Apples, in 50-lb boxes, rings, pressed, fancy.....	8 @ 8 $\frac{1}{2}$
Apples, 50-lb boxes, rings, pressed, good to choice.....	7 $\frac{1}{2}$ @ 8
Figs, pressed.....	5 @ 8
Nectarines, $\frac{1}{2}$ lb.....	5 $\frac{1}{2}$ @ 7
Peaches, unpeeled, fancy.....	7 $\frac{1}{2}$ @ 8
Peaches, unpeeled, choice.....	6 @ 6 $\frac{1}{2}$
Peaches, peeled, in boxes.....	12 @ 14
Pears, halves, choice to fancy.....	8 @ 9
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	6 @ 7
Prunes, Silver.....	— @ —
Prunes, 4 sizes, in bags, 3@3 $\frac{1}{2}$ c; 50-60s, 4 $\frac{1}{2}$ @4 $\frac{1}{2}$ c; 60-70s, 3 $\frac{1}{2}$ @4c; 70-80s, 3 $\frac{1}{2}$ @3 $\frac{1}{2}$ c; 80-90s, 2 $\frac{1}{2}$ @3c; 110s and less, 2@—c.	

COMMON SUN-DRIED.

Apricots.....	6 @ 7
Apples, sliced.....	4 @ 5
Apples, quartered.....	4 @ 5
Figs, Black.....	3 @ 3 $\frac{1}{2}$
Figs, White.....	3 $\frac{1}{2}$ @ 4
Peaches, unpeeled.....	5 $\frac{1}{2}$ @ 6 $\frac{1}{2}$
Pears, prime halves.....	5 $\frac{1}{2}$ @ 6 $\frac{1}{2}$

RAISINS.

Old are practically out of stock, and nothing of consequence has yet been done in new, making it impossible for the time being to give regular quotations. Some transfers are reported at Fresno at 3 $\frac{1}{2}$ c. for Muscatels and 5c. for Sultanias in the sweat boxes.

CITRUS FRUITS.

Oranges inclined against sellers, despite limited offerings, the demand being very slow at this date. Lemons were in fair request, but offerings were considerably in excess of the inquiry and quotations were marked downwards. There was a further cut in the prices of Limes, with supplies liberal.

Oranges—Valencias, $\frac{1}{2}$ box.....	1 50 @ 2 50
Lemons—California, select, $\frac{1}{2}$ box.....	2 75 @ 3 00
California, good to choice.....	2 00 @ 2 50
California, common to fair.....	75 @ 1 75
Limes—Mexican, $\frac{1}{2}$ box.....	3 00 @ 3 50

NUTS.

Market has developed no new features the current week. The Almonds now here are mostly if not wholly in second hands and are being steadily held. Prices for new crop California Walnuts are now being arranged. Based on prices for foreign Walnuts, our No. 1 soft shell should command in Eastern centers about 11c. Business doing in Peanuts is at steady values, with stocks of very moderate volume.

California Almonds, shelled.....	18 @ 22
California Almonds, paper shell, $\frac{1}{2}$ lb.....	12 @ 14
California Almonds, soft shell.....	10 @ 12
California Almonds, hard shell.....	6 @ 7
Peanuts, California, fair to prime.....	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$
Peanuts, Eastern, hand-picked.....	5 $\frac{1}{2}$ @ 6
Pine Nuts.....	5 @ 6

WINE.

The market is practically bare of offerings of wines from first hands. Last year's dry wines remain quotable nominally at 22@25c per gallon. Wine grapes

are now receiving the attention of the wine dealers, and they are more anxious to effect purchases than they are to quote prices. Values for wine grapes are showing a wide range, and for dry wine varieties may be said to be \$18@25 per ton, with possibility of very common going under inside figure and of very choice commanding above outside quotation. Sweet wine grapes are going mainly within range of \$12@18 per ton for first crop, although there are some Muscats quoted down to \$10.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{4}$ sacks.....	129,776	1,143,703
Wheat, centals.....	37,548	573,858
Barley, centals.....	21,289	844,362
Oats, centals.....	24,065	223,339
Corn, centals.....	95	13,300
Rye, centals.....	560	7,995
Beans, sacks.....	2,587	21,269
Potatoes, sacks.....	37,142	270,399
Onions, sacks.....	9,017	64,130
Hay, tons.....	2,352	27,177
Wool, bales.....	2,096	16,142
Hops, bales.....	180	205

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{4}$ sacks.....	97,456	922,900
Wheat, centals.....	36,414	462,291
Barley, centals.....	272,883	604,974
Oats, centals.....	...	1,165
Corn, centals.....	100	7,126
Beans, sacks.....	123	1,626
Hay, bales.....	30	641
Wool, pounds.....	...	214,795
Hops, pounds.....	519	21,584
Honey, cases.....	...	1,420
Potatoes, pack's... ..	185	7,482

California Dried Fruit at New York.

New York, Sept. 11.—Evaporated apples, common, 5@8c; prime wire tray, 8 $\frac{1}{2}$ @8 $\frac{1}{2}$ c; choice, 9c; fancy, 9 $\frac{1}{2}$ c. California Dried Fruits.—Market steady, with a fair volume of business, mainly at full figures. Prunes, 3 $\frac{1}{2}$ @7c. Apricots, Royal, 8 $\frac{1}{2}$ @13c; Moorpark, 9 $\frac{1}{2}$ @14c. Peaches, unpeeled, 7@9 $\frac{1}{2}$ c; peeled, 11@15c.

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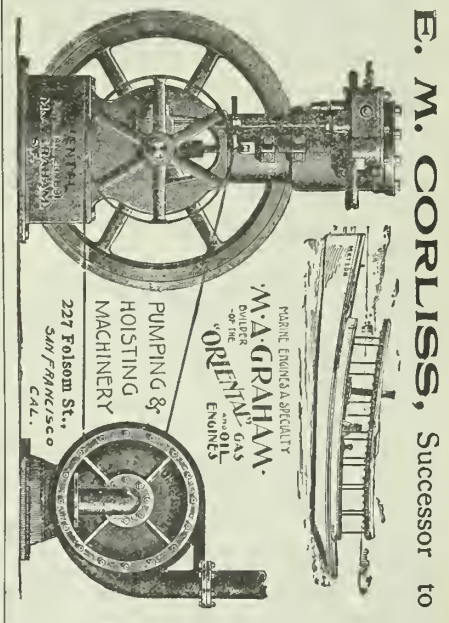
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## THE POULTRY YARD.

### Seasonable Suggestions.

TO THE EDITOR:—Although during the hot summer months poultry men have not the care and anxiety of hatching and caring for young chickens, still there is constant work to be done and provision made for the future. Vigilance must be exercised in the poultry yard. There is danger just now that the younger fowls of the flock may take cold, because of the cool, foggy fall mornings.

Watch the hens narrowly. A slight cold is first noticeable by a running at the nose, the nostrils becoming clogged. Now is the time to take steps to remedy the evil; for here, as elsewhere, "a stitch in time saves nine." These slight colds, neglected, will develop into distemper, to be followed by that dread disease, roup.

Camphorated oil, injected into the nostrils of fowls having slight colds, is an excellent remedy. It is well to keep constantly on hand the following mixture: Turpentine, kerosene and sweet oil, equal parts, in which put a few drops of carbolic acid. In this dissolve a liberal quantity of camphor. There is nothing better.

Potassium permanganate of potash is an excellent remedy for throat troubles in poultry. Dissolve a teaspoonful in a quart of water; put in a bottle and keep corked tight. This is to be kept as a stock preparation. If fowls have colds, put a few drops of this in their drinking water. If the cold has gotten quite a hold, make the dilution a little stronger, and, taking the fowl by the head, insert to just above the eyes, allowing some of the liquid to be swallowed. This is useful for swelled head and roup. For the latter trouble make the dilution quite strong, adding a small quantity of powdered bluestone. This is for the head bath and also to be put in the drinking water.

One must always have a watchful care of the flock. It pays. Sick fowls should be isolated at once. As a rule, there is not much made in doctoring fowls that are very sick. A fowl that has the roup in the advanced stage should be killed without ceremony.

Then, especially at this season of the year, one needs to be ever on the lookout for the small red mites and the larger lice that now breed so rapidly. It pays to fight these pests, for they will get the upper hand if one does not. There are many lice paints on the market, but often home-made preparations answer a very good purpose. Kerosene oil or gasoline is much used to paint the roosts with to destroy mites and lice. Use it once a week during the summer months, when lice breed much more rapidly than in the cooler months of the year. But a better preparation is made by dissolving in a quart of kerosene a

pound of powdered crude naphthalene flakes. Apply this to the roosts, nest boxes, etc., with a common paint brush late in the evening, just before the fowls go to roost.

**MOULTING TIME.**—Many flocks are moulting now and the egg basket is not as full as it was earlier in the season. Moulting is a trying ordeal to the hen, and during this period she should have the best of care. She should not be exposed to chilling winds or the cool night air. Good, nourishing food should be provided in liberal quantity. One may be inclined to feed less than usual, because the hens are not laying as many eggs as formerly. To stint the fowls now is the greatest folly. Feed biddy all she can well digest, always using judgment, and she will abundantly repay you later on. Do not forget the meat meal in the daily ration. Oilcake meal, new process, is excellent at any time, especially during moulting time. Add a little sulphur. Give the fowls powdered or granulated charcoal every day in the year in their mash or in dry meal.

**PREPARE FOR THE CAMPAIGN.**—It is not too early to make plans for the coming hatching season. Time passes swiftly and winter is rapidly approaching. Better have all preparations made, so that there will be no delay. Remember the mistakes you made last season; profit by them. The art of raising poultry is not mastered in one year, nor in two. Those longest in the business are ever learning something new.

If you are thinking of getting a new incubator, endeavor to purchase a machine that has an established reputation. Overhaul the brooders and see that they are in the best condition. All this will pay, and pay well, for the poultry business is to be a profitable one in the years to come. Probably more money is to be made in raising hens for eggs than in trying to raise broilers, as a rule. If new hen houses or brooder houses are needed, now is the time to build them, not waiting until the last moment. Profit by the experience of others. You may save yourself much vexation and probably loss of money by so doing.

**HOUSES.**—Elaborately planned, costly houses for brooding or for laying, for poultry young or old, are not necessary in this climate. Expensive houses may be needed in States where the winters are much colder than they are in this part of California. Here the most that is needed is protection from winds, the avoidance of all draughts, good ventilation withal. Of course, the brooder house needs to be snug and warm, but many fall into the error of making them too warm; they use too much glass and do not arrange good ventilation. All this can be provided without going to great expense.

**WATER SUPPLY.**—I have used with satisfaction this season a cheap vessel for holding drinking water in the poultry yard. Any one can do the same at short notice. Simply cut a small hole in the corner of a

kerosene oil can opposite the small faucet. Fill the can with water, laying it on its side on a stone or small box, keeping it a few inches from the ground, with a shallow dish beneath. Regulate the flow of water to suit yourself by the faucet. Keep in a shady place, renewing the supply daily.

One of the handiest things in the poultry yard is a mill for grinding grit, grain, shells or charcoal. I am using an Excelsior No. 750. It is a hand machine, but runs easily, and is a great convenience.

**FEEDING.**—Bulletin No. 132, recently issued by the College of Agriculture, University of California, should be in the hands of every poultry man. It can be obtained for the asking. It is entitled "Feeding of Farm Animals," and is of general interest to all farmers. It contains tables giving the composition of all the materials used for feeding animals and poultry and is a very exhaustive report. Every page is full of valuable information. There is a special chapter on poultry feeding, several well balanced rations being given. The pamphlet will bear much study. No one at all interested in the matters it treats of can fail to derive much profit by its perusal.

Napa.

A. WARREN ROBINSON.

### Fall Work.

C. E. R. writes to the Corning Era a few suggestions of what should be begun at once:

One-half of your hatch will be cockerels. Sell them as broilers or fryers. They should weigh two to two and one-half pounds each, and should be plump and fat. The most acceptable fowl for such a purpose is a Plymouth Rock or Wyandotte, or a cross with a Cornish Indian Game. The first are good enough. The highest prices paid are about \$6 to \$8 per dozen, from February 1 to April 1.

The best time to set eggs for broilers is in September. The chicks will mature quickly and keep healthy if free from lice and kept warm and dry and regularly fed.

After a hen has moulted sell the first dozen eggs and set the remainder. The eggs will then be at their best. The chicks will be strong. The cool winter climate is a long way ahead of the dry heat of summer. I wouldn't hatch a chick after May 1.

Why raise broilers? Well, you have the little cockerels. Why keep them till they eat their heads off, fight and worry the hens and keep them from laying? Keep no more males than are necessary to serve the hens. Make a separate yard. Select fifteen choice hens—best layers. Procure two new cockerels from thoroughbred stock—vigorous and active. Put them in your selected yards. Let each male serve the hens, alternating weekly, and use the eggs for building up your stock. Cross hens with a cockerel, or pullets with a year-old male, and feed your cockerels all they can eat, and no more. Watch the newspapers and sell at the best rates.

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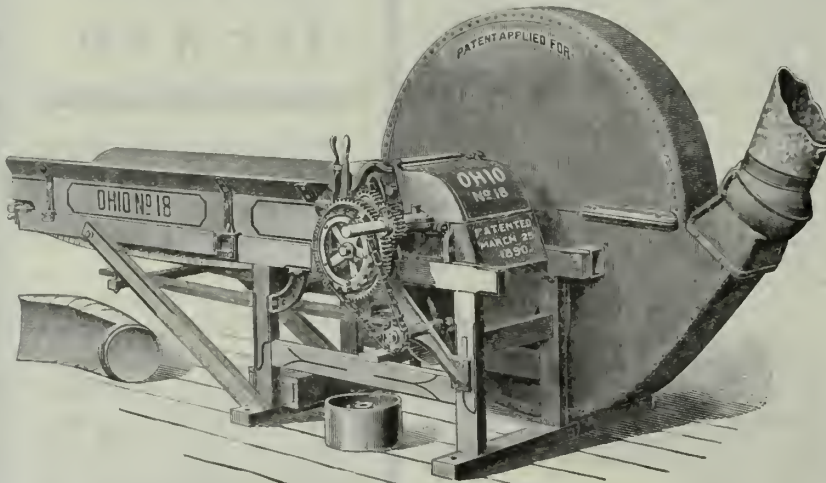
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## FLORIST AND GARDENER.

### The Cactus in California.

Eleanor M. Lucas of Pleasanton, Alameda county, gives the Mayflower an account of cactus growing in the open air in California which will be helpful to many new comers.

The cactus (with the exception of Phyllocacti) is a plant you cannot force; at the same time so sluggish in its vital action that it grows and thrives where other forms of vegetation perish from sheer inanition. It will flourish in thin sterile soil, on a heap of rocks, in sandy soil, in ashes—but give it a rich soil, well matured and well watered, and it will literally go to pieces, decay and collapse into a mass of pulp and spines.

Let us begin with cuttings. If you make a cutting, make a clean cut. Heat an iron redhot (the poker will answer our purpose and it is the handiest tool for a woman to use) and sear the cut edge until it looks white and dry. Have a seedpan or box of coarse sand. Do not make the mistake of sifting the sand—this may cause it to "pack," and being close is liable to cause decay. If you cannot obtain coarse sand, mix with the sand some broken charcoal or bits of granite or other rocks. Do not use broken pottery—it holds the moisture and anything of the kind will induce decay. Have plenty of drainage in the pan or box; one-third drainage is not too much. Water the sand until it is damp, then make a hole, insert the cutting and press the sand closely about it. Let it alone for at least three days, placed in the sun. If at the end of this time the sand is very dry, water slightly. One cannot give explicit directions for watering, as climatic conditions vary. Better err by keeping the cutting too dry than by giving too much water. Under good conditions a cactus cutting will root in two weeks, and at the end of the third week will throw out new shoots, or new spines, as the case may be, and will begin to grow. Then transplant into bed or pot, following directions given below.

For plants with roots, cut off all the dried roots when you receive the plant. If the plant is bruised, sear it with a hot iron, or dust with powdered charcoal. If the roots are bruised, better cut close to the plant, as they will decay anyway and you may lose the plant in trying to save one or two roots. Insert in sand, as for cuttings, until the roots are growing, then pot, always remembering to water sparingly until well established.

In a mild climate where many varieties are hardy, the plants may be grown in beds in the open ground.

The party who writes that "cacti require no care" must have the Echinopsis in mind. It is a plant that will endure the most ardent neglect, and fairly shames one into treating it with more courtesy. Its flowers are a joy, the white ones so perfect in their pure spirituality, and so delicious in their wonderful fragrance; and the pink blossoms are large and satiny, lined with an ethereal silvery sheen, its

deep throat tufted with a downy fringe. The soil in the cactus bed should be very loose and gravelly and well drained. Nothing is more fatal to a cactus than poorly drained soil—they do not like wet feet.

While cacti will live in any dry soil, they are responsive to good treatment and proper soil. For general planting use a mixture of half sand and half clean garden loam. For Phyllocacti use one part well decayed manure to two parts of the above, and to each bushel use a 5-inch pot of clean lime. For large Echinocacti add to the mixture of sand and loam one 5-inch pot of crushed granite, and, if the spines are highly colored and the desire is to intensify it, add to every 6-inch pot about four tablespoonfuls of iron filings. These can be obtained at any blacksmith shop. For drainage use granite chips or other crushed rock. When potting, use plenty of drainage; water sparingly until the plant is well established, then more liberally.

If the plants are kept in the pots all the year around, the cacti will derive much benefit from plunging the pots into the earth during the summer months. Dig a hole larger than the size of the pot, and 4 or 5 inches deeper; put in a layer of broken rocks; on this place the pot and fill up with the earth. Very handsome beds can be made in this way; growing between the pots are plants of Mesembryanthemums, Sedums, Crassulas and other sun-loving plants. Make the beds where the sun shines the hottest—the spines will be clearer and the blossom brighter.

When well established the plants will endure lots of water, always provided no water stagnates about the roots.

In localities where the soil is heavy and ill-drained, and it is desirable to bed cacti in the open, make an excavation near the center of the bed, about 3 feet deep and as large as possible. Put a layer of stones or old tin cans and such rubbish in the bottom, cover with straw or coarse manure, then fill in your soil, having the bed slightly elevated near the center, and a well-drained bed will be the result.

The plants must be thoroughly sprayed at least once a month—oftener if possible—or their enemy, the scale, will ruin them. If you receive a plant full of scale, burn it; that is your best course of action, because the scale spreads from plant to plant very rapidly. If the plant is very valuable, however, and you wish to make an effort to save it, make an emulsion of half a pound of soap dissolved by the aid of heat, in a quart of water; add two tablespoonfuls of castor oil. Put this mixture into a bottle, cork and shake it until it looks like milk. Dilute with water, a half pint of the emulsion to one quart of water. Put the plant right into this mixture and with an old toothbrush scrub it well, being careful

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to scrub between the spines. Rinse, dry, pot in clean sand, in a clean, well-scrubbed pot and place in an isolated position, away from other plants. If the scale shows signs of returning, repeat the treatment, and, if this does not avail, burn the plant, burn the sand to destroy any scale in it, and scrub out the pot thoroughly, or your whole collection may suffer. Extreme dryness is one source of scale, so spray the plants faithfully.

Sometimes a plant without any apparent cause will decay at the base. This may be from defective drainage, from worms, especially the big cabbage worms which are very fond of cacti, or from too much water. Cut it off at once, sear the cut part of both pieces, lay the cut off portion in the sun for a few days, and pot in coarse sand. The stump may throw out new shoots if treated to new soil.

If mealy bugs attack your cacti spray with wood alcohol, using an atomizer. It usually drives them away with one treatment; if not, try again.

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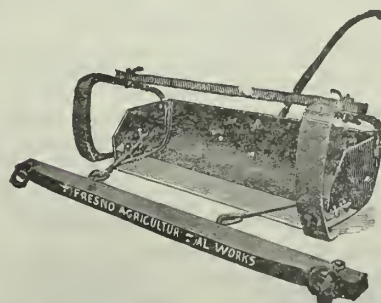
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## THE VETERINARIAN.

## Treatment for Roundworms in Sheep, Goats and Cattle.

Sheep, goats and cattle suffer from the effects of roundworms. These parasites are found particularly in the lungs, the fourth stomach, and the bowels, and, when present in large numbers, they may result in the death of 5% to 50% of a flock. For some of these parasites treatment is possible, but for others treatment has not been found altogether satisfactory. Dr. C. W. Stiles of the Bureau of Animal Industry, United States Department of Agriculture, has just issued a circular on this subject.

**TREATMENT.**—Roundworms which live free in the fourth stomach or in the bowels may be expelled by using various drugs in drenches. A long list of medicines might be mentioned, but many of the drugs most highly recommended frequently fail to effect a cure. Failures are due to several causes: The drug itself may be of little or no value; it may not be administered in the proper dose; it may not be administered in the proper way.

One of the most commonly used drenches is turpentine, but more satisfactory results are obtained from the use of coal tar creosote, or coal tar creosote and thymol.

**COAL TAR CREOSOTE.**—I have had excellent success in treating sheep, goats and cattle for the twisted wireworm (*Strongylus contortus*) with a 1% solution of coal tar creosote. The medicine is easily prepared and quite inexpensive. It may be purchased of the druggist in small quantities of one ounce or in bottles. One ounce is sufficient for about twenty adult sheep, and the cost of the treatment is less than 1 cent per head. If creosote is purchased by the pound, the cost is reduced to less than 1 cent per head. If creosote is called for at a drug store, beechwood creosote will usually be dispensed. This is more expensive than coal tar creosote and not so satisfactory in expelling worms.

A 1% solution of coal tar creosote is made as follows: Coal tar creosote 1 ounce, water 99 ounces, equal to 6 pints and 3 ounces.

Twisted wireworms (*Strongylus contortus*) taken directly from the stomach of sheep or cattle die in one-half to one and a half minutes when immersed in this solution.

If, in dosing, this liquid enters the lungs the animal may succumb in a few minutes. If the dosing is performed carefully, as much as 6½ ounces may be given to a full grown sheep without fatal results. In some cases, however, the animal shows ill effects, from which it usually recovers within half an hour. Six ounces were given to a number of sheep without the slightest ill effects. The following gives the doses of the 1% mixture which were used in about 400 cases without ill effects: Lambs four to twelve months old, 2 to 4 ounces (about 60 to 120 c.c.); yearling sheep and above, 3 to 5 ounces (about 90 to 150 c.c.); calves three to eight months old, 5 to 10 ounces (about 150 to 300 c.c.); yearling steers, 1 pint (about 480 c.c.); two-year-olds and above, 1 quart (about 960 c.c.).

Sheep, goats and calves which re-

ceived this treatment showed a marked improvement a few days after receiving a single dose.

In experiments with creosote at Washington, D. C., sheep were drenched with a 1% solution and killed immediately afterwards. Upon opening the fourth stomach it was found that the wireworms present were dead. In some cases where this was tried later the wireworms were found to be still alive, but it is believed that the explanation of this fact has now been discovered. Creosote does not appear to have much effect upon the worms below the stomach.

If an overdose is given by mistake, and if the sheep appears severely affected by it, the animal should be placed in the shade. Even in some cases of very severe overdoses, where the animal is given up for practically dead, it may entirely recover within an hour or so.

**COAL TAR CREOSOTE AND THYMOL.**—If, in addition to the stomach worms, the animals were suffering from severe infection of bowel worms, such as the hook worms, better results were obtained in the treatment when powdered thymol was added to the creosote. In cases of this kind the creosote solution is prepared as directed above, and 30 to 80 or even 100 grains of thymol added to each dose after it has been measured.

Thymol is expensive, the price varying in different parts of the country. It may be purchased by the ounce, but is considerably cheaper if purchased by the pound. Avoid using thymol which has become yellowish or reddish and which has run together in the bottle so as to form a solid mass. Powder the crystals and have the druggist measure 30 grains. Give 30 grains to a lamb, about 50 grains to a yearling, and 70 to 80 or 100 grains to older sheep, according to size.

In experiments I have had excellent results with a single dose of the creosote and thymol mixture. If necessary, however, the dose could be repeated after a week.

**METHODS OF DRENCHING ANIMALS.**—The popular method of drenching is with a bottle. The use of a drenching tube is, however, far more satisfactory. A drenching tube may be made by taking an ordinary tin funnel, which may be purchased for 5 or 10 cents, and inserting the narrow end into one end of a rubber tube or hose—say 3 feet long and 3/4 or 1 inch in diameter; into the other end of the rubber tube is inserted a piece of 3/4-inch brass or iron tubing about 4 to 6 inches long.

The metal tube is placed between the animal's back teeth, and the sheep or calf is allowed to bite upon it. The water or drench is poured into the funnel, which may be held by an assistant or fastened to a post at a convenient height. The man who holds the metal tube between the animal's teeth can control the animal's head with the left hand, and by holding the tube with the right hand, near the point of union of the rubber and metal tubes, he can easily control the flow of the fluid by pinching the rubber hose. Care must be taken not to hold the patient's nostrils, otherwise the dose will enter the lungs.

It is usually advisable to fast animals twelve to fifteen hours before dosing.

**POSITION OF THE ANIMAL DURING DRENCHING.**—Different persons prefer to hold the animals in different positions during drenching. Thus (1) the animal may be left standing on all four feet; or (2) it may be placed on its haunches, one man holding its back up against his own body; or (3) it may be placed directly on its back on a sloping piece of ground, its head being in a direct line with its back, and higher than its rump; or (4) it may be placed upon its side, the head being brought around so that the horns are squarely on the ground; the operator may then place one foot on one of the horns (especially in the case of semi-wild cattle) and thus aid in holding the animal still.

So far as administering the dose is concerned, the position on the back (3) is by far the easiest in the case of sheep, and the side position, with head down (4), is the easiest in dosing cattle.

Furthermore, in these positions there is much less danger of an accident by getting the dose in the lungs. If animals are dosed standing or on their haunches, the nose should never be allowed to go above the eyes, otherwise the drench may pass down the windpipe into the lungs.

By dosing sheep with water colored red and blue with dyeing material, and killing the animals immediately after the liquid was swallowed, the following results were obtained:

If the dose was given with the sheep standing (1), almost the entire quantity went directly into the fourth stomach; if the sheep was placed on its haunches, the fluid passed in part into the fourth stomach and in part into the first (the paunch); if the sheep was placed directly on its back (3), or if a steer was placed on its side (4), with head down, almost the entire dose passed into the first stomach (the paunch). If the animal, even when standing (1), struggled to a considerable degree, a portion of the fluid passed into the paunch.

It will be immediately apparent that these facts are of practical importance in dosing. Better results may be expected if the sheep is dosed standing.

## HORSE COLIC,



Distemper, Founder, Pneumonia, etc., as well as all forms of Lameness, Contracted Cord, Curb, Splint, etc., are instantly relieved, and invariably cured by the use of

## Tuttle's Elixir.

Satisfaction guaranteed or money refunded. Used and endorsed by the Adams Express Company. Used by leading breeders and turfmen everywhere. Has saved and cured many valuable horses. May do likewise for you.

**TUTTLE'S FAMILY ELIXIR** cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 163-page book, "Veterinary Experience," FREE. Tuttle's Elixir Co., 33 Beverly St., Boston, Mass. 437 O'Farrell St., San Francisco, Cal. Beware of cheap imitations—none genuine but Tuttle's. Avoid all bilsters; they offer only temporary relief if any.

## FANCY POULTRY.

We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Publishers of the Pacific Coast Poultryers' Hand-Book and Guide. Price 40c. postpaid.

**PACIFIC INCUBATOR CO.,**  
1317 Castro Street, Oakland, Cal.

## FOR SALE.

## A Herd of High-Bred Cows and Six Heifers.

A Bargain if Sold Within Twenty Days.

For further particulars inquire of or address J. W. HARTZELL & CO., 201 Georgia St., Vallejo, Cal.

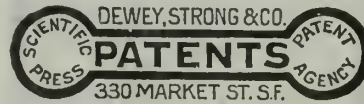


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LUMP JAW  
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## HOLSTEIN CATTLE.

SLEEPY HOLLOW RANCH, SAN ANSELMO, MARIN CO., CAL.

ALL THE LEADING FAMILIES OF THE BREED.

Every Sire directly imported from Herds of the Greatest Eastern Breeders.

Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams.

Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.



## ORDERS ARE COMING IN

for spring pigs. We have shipped a few and have orders entered for others to be shipped when old enough. We sold two of the three hogs advertised the past few weeks and now offer the remaining Poland-China sow farrowed June 25, 1900, sired by Missouri Best U. S. 46355 and out of Happy Queen 134192 sired by the great \$4000.00 boar Happy Union #1111. Write us for particulars.

SESSIONS & CO., Lynwood Dairy & Stock Farm, 117 E. 23rd St., LOS ANGELES, CAL.

## EMERY'S BEEF, BLOOD &amp; BONE

FOR POULTRY.

Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are high. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

N. OHLANDT & CO., INDIANA AND YOLO STS., SAN FRANCISCO, CAL.

## Breeders' Directory.

## HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aired, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER Saxe & Son**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**JERSEYS, HOLSTEINS & DURHAMS.** Bred specially for use in Dairy. Thoroughbred Hogs, Poultry, William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**J. H. GLIDE**, Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

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**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**WILLIAM NILES & CO.**, Los Angeles, Cal. Nearly all varieties chickens, geese, ducks, peafowl, etc.

**SANTA TERESA POULTRY FARM**, Eden Vale, Santa Clara Co., Cal. Illustrated catalogue with show record for 1900, free. Agents Eclipse Aluminum Leg Bands; sample 2 cts.

**FOR THOROUGHbred FOWLS** in small lots, address Cottonwood Farm, Pleasant Grove, Cal.

**MEAT MEAL.** Best quality. Lowest price. A. Warren Robinson, Napa, Cal.

**BRONZE TURKEYS.** Ed. Hart, Clements, Cal.

## SWINE.

**BERKSHIRE, POLAND-CHINA & DUREC HOGS.** Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**POLAND-CHINA.**—Spring pigs \$15.00 to \$20.00 each. S. P. Lindgren & Sons, Kingsburg, Cal.

**50 HEAD CHOICE POLAND-CHINA HOGS** from recorded breeders. Boars 6 to 10 months old; fit to head any herd. P. H. Murphy, Perkins, Cal.

**BERKSHIRE HOGS**, headed by the great boar Artful Lee 52630. S. B. Wright, Santa Rosa, Cal.

**THOS. WAITE**, Perkins, Cal. Breeder Reg. Berkshires. Sweepstakes State Fair and Tanforan, 1900.

**CHAS. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshires, Poland-China and Essex Hogs.

**20 FINE BERKSHIRE PIGS FOR SALE.** Chas. C. Perkins, Sacramento, Cal.

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**POULTRY** supplies of all kinds. Send for my new price list and booklet, "HOW TO FEED FOWLS FOR PROFIT." CROLEY, 608 Sacramento St., San Francisco, Cal.

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THE BEST FEED FOR STOCK, CHICKENS AND PIGS.

For sale in lots to suit by

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### The Honey Output.

In the last good honey year, says the Los Angeles Times, there were at least 2,500 tons of honey made from the wild sage blossom. For the last three years the bees and beemen have been hard put for a living, because of the light rainfalls in the mountains, but this year the bee business is again in full swing. During dry years, bees have to be fed like any other stabled workers, and so the apiarist has to pay for drought along with the rest. Now the flowers have bloomed again in all their glory, and the bees that have survived are putting in full time on the hillsides.

The output of honey for this year will probably amount to 2,000 tons. Eastern merchants are scrambling for California honey this year, for the old stock has long since been exhausted. Brokers have been alert to secure the product in advance, but the beemen are holding on for very high prices.

During the years of little output, prices of extracted honey went up to 10 or 12 cents, and comb to 17½ cents per pound. Eastern buyers want extracted honey delivered at the railroad stations at 3½ cents per pound for dark, 4 cents for medium and 4½ cents for bright amber. Beemen have been holding their honey at about ½ a cent higher, so business has been slow. In some instances very light amber has sold at 4½ and 4½ cents, and water white at 5 cents. But while the demand is good, the divergence of views between buyers and sellers has checked business. To date not to exceed 50 carloads of honey have gone out of this section. This is less than half the crop.

Of the 50 carloads 10 have been comb honey. This is unusual, as comb honey cost here 10 or 12 cents per pound, and the difficulties of transportation, with the risk of jarring and breaking the comb is great. Consumers will have to pay close to 50 cents for honey shipped in this form.

### French Prune Prices.

The following cable was received on the 4th inst. by the Pacific Commercial Museum from Bordeaux, France:

Size of prune crop 20% less than last reported (cable of Aug. 3). Prunes run above the average in size and quality. Opening prices, delivered on the quay at Bordeaux, are as follows:

Grades		
American.	Bordeaux.	Per pound.
36-38s.	33-35s.	16c.
40-42s.	36-38s.	14½c.
44-45s.	40-45s.	13½c.
50-55s.	45-50s.	11½c.
60-65s.	55-60s.	9½c.
70-75s.	65-70s.	8½c.
100-105s.	90-96s.	7c.
110-120s.	100-110s.	5½c.

NOTE.—On Aug. 3 (last report) the Consul cabled that the prune crop was estimated 25% less than that of last year.

SOME SUGAR CANE.—Tulare Register: James Estes has a crop of sugar cane that is calculated to make the human eye stick out. It was put in with a drill the first of June and irrigated once. It has grown nearly as thick as hair on the back of a yellow dog and 10 to 16 feet high, and some of the stalks are as big as one's wrist. He had a curiosity to know how much of that sort of cow feed there was to an acre and so cut up a square rod of the stuff and drove on to the scales and weighed it, deducting, of course, the weight of the wagon. The load, green and just from the field, weighed 1180 pounds for what grew on one square rod. As there are 160 rods in an acre, the yield is at the rate of 94½ tons per acre.

### Deafness Cannot Be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75c.  
Hall's Family Pills are the best.

### The Fruit Crop in Germany.

Special Consular Report received by the Pacific Commercial Museum of San Francisco, September 3, 1901.

Consul T. J. Albert of Brunswick, Germany, reports as follows: A special report has been kindly furnished me, at my request, by the editor of the agricultural news of the Brunswick Landeszeitung, and its accuracy may be depended upon:

"The prospects for winter fruit in the north, east and west of Germany are the worst that could be possibly thought. The apples, pears and all seed fruit have suffered so from the drouth and the attacks of insects that a sufficient crop is out of the question. The same is the case with peaches, plums and other stone fruit. The demand for the winter months in the industrial centers will be very great and early shipment and better packing are desired. Packing in tuns or large casks is severely condemned. Apples will be especially wanted which will be in a condition to ripen in the months of January and February. The demand for such fruit lightens the difficulty of shipment and at the same time brings advantages to the consumer."

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR WEEK ENDING AUGUST 27, 1901.

- 681,383.—PISTON PACKING—W. H. Allison, S. F.
- 681,430.—HOIST—T. J. Barbour, S. F.
- 681,297.—LAND ROLLER—F. A. Bruckman, Plainview, Or.
- 681,439.—GUN—H. Carr, S. F.
- 681,618.—SUSPENDERS, ETC.—S. Clegler, S. F.
- 681,668.—SPRAYING TREES—J. M. Clark, Lompoc.
- 681,441.—ENGINE EXHAUST—W. L. Corson, S. F.
- 681,407.—OBTAINING SALT—P. H. Coward, S. F.
- 681,496.—CART—W. A. Cowley, Benicia, Cal.
- 681,408.—TELEPHONE RECEIVER—Cox & Reed, Portland, Or.
- 681,203.—FRUIT GATHERER—C. J. Eddy, Seattle, Wash.
- 681,390.—PIANO PEDAL—J. A. Elwell, Seattle.
- 681,392.—PISTOL HOLDER—L. E. Fugate, Seattle.
- 681,501.—TIRE SETTER—O. Gamas, Wallace, Cal.
- 681,325.—HANDLE BAR—J. Hult, Hood River, Or.
- 681,504.—ROCK DRILL—C. Hultquist, Jerome, Ariz.
- 681,420.—PIPE COUPLING—H. L. Jordan, Santa Paula, Cal.
- 681,332.—MUSIC LEAF TURNER—W. V. Morrow, Los Angeles, Cal.
- 681,576.—MOTOR CARRIAGE—A. S. Parsons, Berkeley, Cal.
- 681,458.—MATCHER HEAD—W. W. Philbrook, Seattle, Wash.
- 681,450.—MATCHER HEAD—W. W. Philbrook, Seattle, Wash.
- 681,581.—ROTARY PUMP—J. Richards, S. F.
- 681,354.—FURNACE—S. M. Trapp, Seattle, Wash.
- 681,594.—AGRICULTURAL MACHINE—D. K. Udall, St. Johns, Ariz.
- 681,362.—VENEER MACHINE—W. W. Wood, Tacoma.
- 39,990.—DESIGN—W. R. Smith, Napa, Cal.

## PATENTS

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EXPENSE SAVED INVENTORS BY  
PRELIMINARY SEARCHES.

COMMUNICATIONS CONFIDENTIAL.

Our U. S. and Foreign Patent Agency presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American reports since 1793, with full copies of U. S. Patents since 1872. As a result we are able to give reliable advice as to the patentability of an article, frequently saving the inventor the cost of an application. Our Washington branch tends exclusively to our business before the Patent Office. All worthy inventions patented through DEWEY, STRONG & CO.'S Patent Agency will have the benefit of a description in the *Mining and Scientific Press*. We transact every branch of patent business, including filing of Caveats, Trade-Marks, Copyrights, Labels; prepare Assignments, Licenses and Agreements; give Opinions on Patentability and Infringements, etc. Circulars free on application.

**DEWEY, STRONG & CO.,**  
(ESTABLISHED 1860.)  
**PATENT AGENTS,**  
330 Market Street, San Francisco, Cal.  
and 918 F Street, Washington, D. C.

### Hints to Advertisers.

Those who wish to have quick sales of nursery stock should start in with their advertising early this year. Especially is there going to be a scramble for grapevines. The present grape prices will stimulate large plantings. The writers of the following notes ought to find answers in our advertising columns:

TO THE EDITOR:—Please inform me of some reliable nursery where Seedless Sultanas and Thompson Seedless grapevines (rooted) can be procured.—READER, Capay.

TO THE EDITOR:—Can you tell me who has resistant vines for sale rooted? The soil is a heavy black clay loam.—SUBSCRIBER, Cloverdale.

BEET SUGAR FACTORY CLOSING DOWN.—San Bernardino Sun: The big sugar factory at Chino has shut down for the season—about six weeks earlier than usual or than was expected, throwing about 400 men out of employment. The rest of the Chino beet crop will be shipped to Oxnard as fast as it is harvested and will be worked up there. "We closed down the factory because the crop of beets here was not ripening fast enough to keep it going profitably," said Supt. E. P. Hamilton. "Our capacity is 800 tons a day, but they have been delivering only about 250 tons a day. It takes almost as large a force to operate the factory, and as great expense for the 250 tons as if we were running up to our capacity. This was unprofitable, and we will take the rest of the crop to Oxnard. It will be necessary to increase the force there very little to take care of the beets from Chino."

### Employment That Pays

is offered to Women, Men, grown Girls and Boys in the vicinity of their homes by our Subscription Department. We give liberal compensation; the most generous terms ever offered. Prompt reply secures a desirable and permanent position as our special authorized representative, with exclusive rights. Previous experience desirable, but not necessary. **FRANK LESLIE'S POPULAR MONTHLY**, for years a leader among the best 10-cent illustrated magazines for the home is stronger, brighter, better than ever. Articles, Stories by famous writers; illustrations by well-known artists. Outfit free to persons accepted as agents. Write us a postal to-day and name two references. This is an opportunity too good to neglect.

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Positions Secured for All Graduates.

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School of Practical, Civil, Mechanical, Electrical and Mining Engineering,  
Surveying, Architecture, Drawing and Assaying  
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SAN FRANCISCO, CAL.  
Open All Year. : A. VAN DER NAILLEN, Pres't.  
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.



**THE OLD RELIABLE**

**\$50.00 RANGE FOR \$25.00**  
TO INTRODUCE THE  
**WILLARD STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21½ inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. **W. M. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Dept. 8.** Will ship C. O. D. with privilege of examination.

## C. P. Bailey & Sons,

San Jose, California,

Importers and Breeders of **ANGORA THOROUGHbred GOATS.**

Flock founded on our own selections from first importations into the United States.

The only New Blood received in the United States for 25 years is from our two importations FROM SOUTH AFRICA, and OUR RECENT IMPORTATION FROM ASIA MINOR. Don't Buy Doubtful Stock.

**100 Fine Registered Yearling Bucks for Sale.**  
Catalogue Free. A neat booklet on the culture of Angora Goats for 25 cents, post paid.

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The Leading Commercial School  
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ESTABLISHED NEARLY 40 YEARS.  
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FOR SEASON 1902.

Every horticulturist should have my 28-page illustrated catalogue, which tells all about citrus trees; the old sorts and the tested new sorts, also table for planting trees, sowing seed, etc. Your address on a postal will bring one. Address

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**SAN DIMAS NURSERIES,**  
San Dimas, California.

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Tells all about it.  
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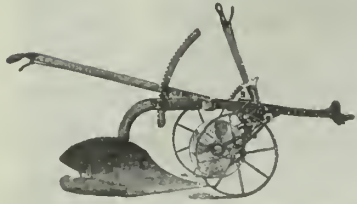




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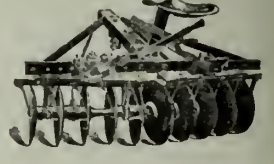
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PLOW.



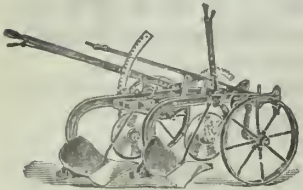
CANTON DOUBLE DISC  
PLOW.



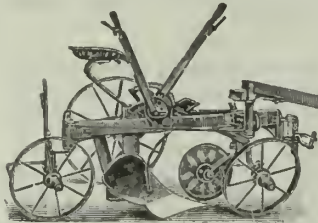
KENTUCKY DISC DRILLS.  
8-10-12 Foot.



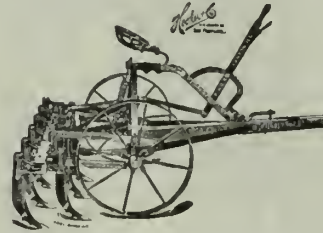
PACIFIC REVERSIBLE  
DISC HARROWS.  
4-5 6 Foot.



CANTON CLIPPER GANG,  
TWO FURROW.



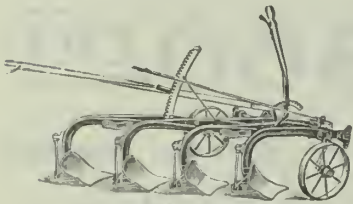
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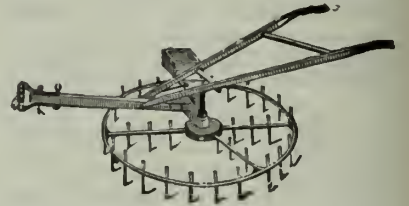
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 24. 12

SAN FRANCISCO, SATURDAY, SEPTEMBER 21, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Industrial Santa Barbara.

We gave recently pictures and comments exponent of the picturesqueness of Santa Barbara and a letter from an appreciative local writer describing the delights of residence in that favored niche in our southern coast line. These matters chiefly related to the parts of the county south of the Santa Ynez mountains, which form a backbone running nearly east and west. North of these mountains there is a region of the county extending from the beaches of the Pacific easterly, composed of mountain sides, foothill slopes and broad valleys, which comprise the chief industrial features of the county, although south of the Santa Ynez there are large and profitable agricultural areas associated with the city, town and villa sites, and even in the most picturesque parts the people are awake to industrial propositions. Still, to make a somewhat arbitrary division of the county from an economic point of view it may be admissible to count the northern part as chief from an industrial point of view, and to arrange our pictures and talk upon that basis.

We have on this page two pictures characteristic of industrial Santa Barbara. The pastoral scene is notable in several ways. It is the finest pastoral photograph we have ever seen, and it is not surprising that the lady who secured the negative has been awarded a first prize for it in a competition arranged by a leading Eastern publication. The scene is typical of large areas of pasture lands in the county. The abundant shade, the flowing water and the animals themselves, so eloquent of comfort, content and good living, bespeak the blessings of the flock owner in that district. It is true that, owing to the vicissitudes in the wool industry, the sheep census is but a fraction of what it once was, but still the opportunity remains and its utilization is extending. The peerless pasturage will again be profitably employed and the value of the lands will advance.

A group of quite different views illustrative of northern Santa Barbara is found in the lower plate, which presents scenes in the Lompoc region, which lies near the coast, and some of the industries representative of that environment. It is a district of wide diversification. The leading fruit is the apple, which finds in the cool coast climate of Lompoc that



In the Pastures of the Coast Range—From a Prize Negative.

slow growth which develops the highest qualities and suitability for long keeping and distant shipment. The coast winds also seem to make the locality distasteful to the codlin moth. The product is good and profitable because of the eager market which awaits it. The leading single industry is dairying, and well-equipped creameries are found at several points in northern Santa Barbara. The views include a picture of the Lompoc creamery, a thoroughly modern establishment and commendable, though there are others in the region of larger capacity. Another view represents the hay harvest, with the baling outfit in operation.

The scene which is, perhaps, more interesting than any other, because seldom seen elsewhere, is the mustard harvesting. California holds an honorable place in the mustard supply regions and the product is keenly sought for export. The excellent publication by the Santa Barbara Chamber of Commerce gives many interesting facts about this special crop. Mustard yields in exceptional seasons as high as twenty-nine cents per acre; in ordinary seasons from eight to twenty cents. The price is from \$1.50 to \$8 per cental, the average about \$2.50. The cost of raising is about the same as grain, except threshing and sacking, which cost about twice as much. In the year 1892 80,000 centals were raised in this district and sold at from \$3 to \$5 per cental, the average price about \$3.50. Approximately \$280,000 were received by the farmers for that crop. In the region of which Lompoc is the center 2500 acres are devoted to mustard growing. No farmer employs himself exclusively in growing it, because of the refusal of the soil to yield two successive crops. Alternation of crops, by putting half the land in beans, barley, corn or beets, while the other half is given over to mustard, is common. Lompoc valley has been in the business of raising mustard for eighteen years, the farmers taking their cue from the abundance of wild mustard found on the hills and in the valleys of Santa Barbara county, and the success stimulated others to take up the crop. The best results are now secured from land lying in the middle of the valley and along the banks of the Santa Ynez river. The soil is dark and almost without grit, and the heavier soil is preferred. Much moisture is necessary and the success of the Lompoc district is due in part to its close proximity to the sea.

The sowing time for brown mustard is in January, and March for yellow. The ground is worked as for grain and the seed sown broadcast, four pounds to the acre. The mustard stalk is straw color, growing from 4 to 5 feet in height. The pods are from 1 inch to 4 inches in length, containing one row of seeds only.



Farming Scenes in the Lompoc District of Santa Barbara County.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, September 21, 1901.

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## The Week.

Thrice within four decades this country has lost its Chief Executive by the all too skillful stroke of the assassin. Thrice has a loving people been plunged in the depths of grief and mourning at the behest of envenomed hate, of lunacy and of anarchy. Thrice has the deed been profoundly deplored and the doer received universal execration and repudiation. In no case has the murderous wretch been cheered by the faintest expression of satisfaction. Two have gone to their graves unwept and unhonored and the third will quickly follow; though it must be owned, with the bitterest chagrin, that our latest abomination may be less desolate of approval than his predecessors. Anarchy has risen to the light of day in this free country as it dared not in other lands, and perhaps the most difficult question which has arisen in the history of the American people now demands solution. Manifestly, freedom is not for all, but for those who merit it. How shall the priceless boon of liberty be preserved for these by its withholding from the others? American statesmanship and humanity have never faced a more difficult question.

It is not surprising that in the more recent experience of the American people foreign commentators read the failure of our proudest ideals. It is not surprising that the London Globe of last Saturday says: "Out of ten Presidents since 1861, three have been assassinated. The percentage is appalling and cannot be paralleled in any civilized State since the days of the Roman empire. If the Presidential chair is not to be regarded as an ante-room of a funeral vault, some very stringent precautions will have to be resorted to. The days of republican simplicity, when the President mingled with his fellow citizens, have passed forever." If this, indeed, be true, if we must forsake the traditions of the republic that the President is always one of the people—an elder brother, with the same right to liberty in his personal movements, safe from the murderer as we are, and free to participate with us in occasions of public interest and rejoicing—then, indeed, sad disappointment will come upon us all. Such a conclusion will not be reached quickly nor easily while there are brave men to meet danger in support of what they conceive to be a manifestation of faith in an American principle.

One of the first deeds of President Roosevelt after he, with deep feeling, took the oath of office on Saturday last is thus described by telegraph:

The President, after the meeting of the Cabinet,

saw a few personal friends, and then, putting on his hat, said to Secretary Root:

"Let us take a little walk up the street and back again; it will do us both good."

Secretary Root assented. When they came to the front walk the police and detectives in citizens' clothes started to follow him. He turned and told them that he did not desire any protection. "I do not want to establish the precedent of going about guarded," he said.

Every American will honor the new President for his declaration that the traditions of the republic must be preserved. He evidently does not desire to sacrifice his right of personal freedom, nor to sacrifice by official cowardice the personal bravery which every citizen should possess.

This may seem a little thing, but it is in fact a very great one. All our Presidents have gone about where honest men have a right to go, and they all should and shall do so in the future. This matter really involves the whole national attitude between our people and those whom they choose to rule over them. A secluded ruler, a ruler afraid of the people, are things abhorrent to the American idea, and if such conceptions of our rulership and our citizenship should be allowed to prevail, we should bid farewell to many things which now constitute the essential principles of our governmental system. A ruler out of sight, a ruler hedged about by protective artillery: it is such which human progress is passing beyond. There must never come a time when a President of the United States cannot say: "Come, let us take a walk up the street and back again; it will do us good."

Well, if not this, what then? Evidently the citizenship of this country must be purged. We have grown careless during the later years of wonderful prosperity and development. We have gloried in the fact that American patriotism would drive every foreign fervor from the blood of those who come within its influence. So, indeed, it will with all save one, and that is not fervor but fever, and must be resolutely and searchingly driven out of the hearts of men, or they must pay the penalty of treason. Not only must the gates be closed to all immigration not clearly certified to be desirable, but public utterance and publication must be reviewed by proper judicial authority. Public assembly for seditious purposes must be prevented. In this country, as events have shown, there is no danger of infringement of liberty, but there is danger of carelessly promoting license. Every intelligent citizen knows the difference between free discussion and vigorous denunciation of public wrong-doing and the beliefs and methods of anarchy. Fortunately, the distinction is so clear that a wayfaring man, though a fool, need not err therein, and if he choose anarchy let him know that he will be crushed beneath the heel of the American people. That such is the will of the people there can be no doubt nor misgiving. If there be any excuse or palliation for anarchy anywhere, there is none under the American flag.

So great are present dangers and so crying the need of averting them that the death of William McKinley was perhaps needed to rouse the people to the determination which now seems universal. Living he rendered his country noble service by teaching the United States its duty in the world at large. What a breadth of view has he shown, and yet what sublime regard for the rights of peoples and nations! How carefully he has proceeded to preserve the nobility and disinterestedness of this country amid all temptations and opportunities! How earnest and sincere has been his course through each situation as it has arisen! What a faith in the destiny of this country as a world power and what confidence in its ability to mete out justice and equity among the nations! In his death he points our people to perils at home and it will be the duty of our legislative bodies to see to it that the warning is heeded and the distinctive glories of this country be preserved from what is now their chief danger. How hateful in the brightness of his life and the nobility of his death seem all the forms of lawlessness which are now giving such wide occasion for apprehension and disquiet! Let the public sentiment be, as never before, aroused against all forms of disorder and turbulence! Let the words of his successor in his official proclamation, issued on Saturday last, impress

upon all the last service to his beloved country rendered by William McKinley:

A terrible bereavement has befallen our people. The President of the United States has been struck down—a crime committed not only against the Chief Magistrate, but against every law-abiding and liberty-loving citizen. President McKinley crowned a life of largest love for his fellow-men, of most earnest endeavor for their welfare, by a death of Christian fortitude. Both the way in which he devoted his life and the way in which, in the supreme hour of trial, he met his death will remain forever a precious heritage of our people. It is meet that we, as a nation, express our abiding love and reverence for his life, our deep sorrow for his untimely death.

The markets for cereals have not fluctuated much since our last issue, nor has business been of a brisk order. Local conditions continued unfavorable for an active movement, and, to make matters worse, the plunging of the nation into mourning, on account of the assassination of President McKinley, seriously affected trade, a considerable portion of the week being devoted to paying the last sad rites to the country's martyred chief. Some wheat and barley have gone afloat, about 10,000 tons in the aggregate, nearly evenly divided, but barley a little in the ascendancy. A better record is likely to be experienced in near future as to movement, and it would be well if the same could be said regarding price. The Government has come to the relief of the oat and hay market to no small degree, contracting this week for 4000 tons of the former and 2500 tons of the latter. Corn is as high as ever and there is very little obtainable at any price. Mill-stuffs are in same light supply as for some time past, as buyers discover to their sorrow. Beans are not arriving very freely, nor is the market displaying the weakness which dealers have been anticipating. In the market for dairy products there are no changes of moment, but a superabundance of supplies other than most select. It looks as though eggs had touched zenith prices for the present. Poultry fared badly, too much Eastern arriving. Live stock and fresh meats have ruled steady. More hogs are coming in, but demand is fully up to the supply. Potatoes and onions have not been in very active request, although values have not tumbled since last review. Oregon and Colorado are walking away, temporarily, with some of our potato trade. In the fresh fruit market changes in conditions or values were not numerous or very important. Table grapes ruled slightly higher, under decreased receipts. Wine grapes are not burdening the market. The citrus fruit trade is dragging and featureless. Honey is offering more freely, and buyers are not competing against each other to any noteworthy degree. Hops are in the same ditch previously reported, with a considerable chasm between buyers and sellers. Wool market is healthy, there being no lack of demand at full current figures for all desirable stock.

The strenuous efforts being made for the preservation of the Raisin Association are succeeding in removing opposition and winning support. A meeting held early last week showed lack of sufficient signing and an adjournment was taken to make further effort. This was successful, for by Saturday last the opposition of bankers and many of the leading business men to the California Raisin Growers' Association had been overcome, and the houses in question are displaying large placards advising the growers to sign the leases. On Monday the Chamber of Commerce officially urged the growers to sign. The Association has "revoked its approval" of seven packers involved in the dispute with the Pacific Coast Seeded Raisin Company, and they will not be allowed to handle Association raisins. The support of the Association is an essential thing. No matter what difference of opinion there may be about men and methods, the Association must be preserved, or the raisin business will glide back into the slough of despond whence it was but recently lifted by strong effort. It must not go back.

We give on another page the leading transactions of an important meeting of wheat growers held in Sacramento last week. It is not strange that this issue has arisen; it is almost strange that it has not arisen sooner. Our farmers are a long-suffering people. That they should sit quietly at home another six



weeks with their markets barred, their transportation facilities closed and their crops left under the open sky to be destroyed by the early rains, is almost too much to expect. That they endured it for six weeks or more, while walking delegates were forbidding workmen to earn the wages they needed, must be simply accounted for by the fact that our farmers are patient beyond measure. The constituted authorities seem to have too much politics on hand to anger these manipulators. There are plenty of men to do all the work that is required, but there is apparently no one to see to it that these willing workers are not beaten off or murdered. The farmers propose to guard the men who will help them get crops aboard the fleet of ships which has long been waiting for cargoes. If the State or county cannot furnish such guard, the farmers must do it themselves. Let all readers of the PACIFIC RURAL PRESS look out for the meeting to be held on Saturday of this week and the convention in Sacramento on September 25. It is merely a necessary measure to save the crops.

The Dairy Convention.

The Dairy Convention at Sacramento was troubled with the old complaint—paucity of attendance. There is a good promise of better things next year. The very carefully prepared address by Ex-Senator Wm. Johnston will appear in our next issue. A good board of directors was chosen as follows: Leroy Anderson, Wm. Johnston, I. Bateman, Dr. W. M. Sherman, S. E. Watson, Wm. H. Saylor, Wm. R. Roussel, M. H. Hotaling, C. E. Hill, Peter J. Shields and Henry Lyons. Afterwards Judge Shields was chosen president and S. E. Watson secretary.

It was determined that the board should adjourn to meet in San Francisco within the next two months, when three committees of ten each are to be appointed—one to secure a very large exhibit of dairy cattle at the next State Fair; another to secure a large and complete exhibit of dairy machinery and appliances; the third committee to endeavor to secure the largest exhibit of dairy produce ever shown in California.

The new board proposes to work with vigor and to enlist every agency and interest in California, to the end that the Dairy Convention at the State Fair next year will be the largest dairy meeting ever held in the West. Major Henry E. Alvord of the Department of Agriculture at Washington will attend the convention, and sessions of the convention will be held at the Pavilion, where dairy machinery will be shown in operation and dairy products will be exhibited, scored and commented upon. An adjourned meeting of the convention will be held at Agricultural Park, in the center field, where all the dairy cattle will be inspected by the members of the convention. A very elaborate programme will be presented to the leading butter makers and breeders of dairy cattle of the State, and the instructors of the State University Dairy School will participate.

QUERIES AND REPLIES.

A Small-Flowered Lupin.

TO THE EDITOR:—I inclose a sample of what appears to me a pink lupin. Is it good for turning under as a green fertilizer? It grows with me in profusion.—W. J. B. MARTIN, Redding.

It is a small-flowered lupin and so far as the character of the plant goes is suitable for green-manuring. The point to be determine is whether it will grow at a time of the year when moisture can be spared for it without robbing other crops which are wanted from the land. California green-manure plants must as a rule grow in the winter to be most available.

Defiance Wheat.

TO THE EDITOR:—Would Pringle's Defiance wheat be a good kind for this valley?—GROWER, Escondido.

The wheat you mention is desirable for regions where wheat rusts badly, because it will resist the rust where other kinds will be destroyed by it. For this reason Pringle's Defiance became, about twenty years ago, popular in the coast region of Ventura county, where people were almost discouraged from wheat growing because of the rust. It has been largely grown in that region ever since. Whether it

would be worth while to grow Defiance depends upon whether you have much trouble with rust. If not, then you can grow Sonora and other white wheats; but if rust is bad and frequent, you must seek resistant varieties, like Defiance, though they may be darker in color.

Cost of a Bushel of Wheat.

TO THE EDITOR:—Will you kindly give an estimate of the cost of producing a bushel of wheat and barley in this State?—READER, Oakland.

This is not an easy matter, because the cost of a bushel depends directly upon the number of bushels which are secured to the acre. An effort was made by the State Agricultural Society in 1894 to determine whether wheat could be profitably grown for 1 cent a pound, and the results were fully presented in the columns of the PACIFIC RURAL PRESS at that time. They are also to be found in the annual report of the society for 1894. There was the greatest confusion in the reports, because of the difference in yield and because there was such great variance in the cost of the various acts involved in the growing and the amounts which had to be charged in for interest, because of the difference in land values. Take an instance in Glenn county, upon land worth \$15 to \$40 per acre :

	Cost of 10 bushels per acre.	Cost of 30 bushels per acre.
Plowing.....	\$2 00	\$2 00
Seed.....	1 00	1 00
Sowing.....	50	50
Harvesting.....	1 00	1 75
Sacks.....	30	72
Hauling.....	40	96
Totals.....	\$5 20	\$6 93

The foregoing seems to be fairly representative of wheat growing in the interior. Adding the interest at the valuation given above, and figuring the value at current market rates, will give the profit.

Take another report, giving the actual results of farming one acre in wheat for five years. The cost is about at the minimum and the returns very small, because probably of irregular rainfall and the low price of wheat. It is such experience as this which has discouraged growers so thoroughly :

COST OF FARMING ONE ACRE FIVE YEARS.

Plowing.....	\$2 50
Harrowing.....	1 25
Seeding.....	1 25
Harvesting.....	6 00
Hauling.....	1 15

Total.....\$12 15

Value of grain produced in five years  
on one acre.....\$24 90  
Cost.....12 15

Return per acre.....\$12 75  
Deducting interest on value of land,  
\$20, at 7% for five years.....7 00

Net balance per acre for five years.\$5 75

Evidently the land was not worked and seeded every year, but it represents a minimum cost of working, no doubt. If we take the average yield of wheat per acre as reported by the Government statisticians, which for California is 13½ bushels per acre, the average cost would not vary much from 1 cent per pound. Barley costs less than wheat, for the yield is greater and the cost of seed less, etc. An arbitrary estimate of the average actual cost of barley would be something like 85 cents per cental. But, after all, these arbitrary averages are of little satisfaction.

Leaf Spot of the Peach.

TO THE EDITOR:—I send peach leaves supposed to be infested with shothole fungus. We sprayed the trees last spring at the time of the first leaves, the only apparent result being that inside of four weeks all the leaves that were on at spraying time dropped off. The spray used was Bordeaux mixture. What shall I do to get better results?—S. HILTON, Olinda.

The leaves show a fungus of the "leaf spot" class, which includes the shothole of the apricot, but the species is different. Coming on so late in the season as this, and in such moderate amount as these leaves show, it will probably not be a serious trouble this year. Next year, if it should appear earlier, the trees should be sprayed with Bordeaux mixture, or with copper carbonate solution, if the fruit is large enough to be marked by the Bordeaux mixture. Bordeaux ought not to affect peach leaves as you describe. Are you sure you made it right? Too

strong Bordeaux will do mischief to the foliage, though it may be harmless as a spray before leafing out.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending  
Sept. 16, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

The temperature has continued nearly normal. Northerly winds have prevailed in most sections, but no damage has been done. Fruit drying has progressed rapidly and grapes and late deciduous fruits have been benefited by the clear, warm weather. Grapes are yielding a better crop than expected in many places. Prunes and Salway peaches are yielding good crops in Yolo and Solano counties. Oranges and olives are in excellent condition and good crops are expected. Tree pruning has commenced. Hop picking is completed in the fields around Wheatland. The yield is above the average and quality excellent. Grain shipments continue light, owing to labor troubles.

COAST AND BAY SECTIONS.

Warm, dry weather has prevailed in most sections during the week, and conditions have been more favorable for fruit drying and late deciduous fruits. Light rain has fallen in Humboldt county, greatly benefiting pasture and late crops. Hop drying and baling are in progress. Grain threshing and hay baling continue, but shipments are light. Grape picking is progressing and wine making has commenced in Sonoma county. The grape yield is estimated considerably below average. A good crop of apples is being gathered. The frost on the 8th damaged tomatoes, pumpkins and beans in portions of Lake county. Sheep shearing has commenced.

SAN JOAQUIN VALLEY.

Clear, warm weather has continued during the week, with cool nights. Owing to the low humidity, conditions have been very favorable for raisin making and fruit drying. Large quantities of grapes are being shipped and the wineries have commenced operations. A good portion of the first crop of raisin grapes is on trays. Grapes are of excellent quality and in many places the yield is exceeding early estimates. The prune crop is light. Melons of good quality are plentiful. Citrus fruits are looking well. The fourth crop of alfalfa has been gathered. Grain threshing and shipping continue. Sweet potatoes are yielding well. Irrigation water is plentiful.

SOUTHERN CALIFORNIA.

Cool weather has continued during the week, with heavy fogs at night along the coast. Grain harvesting and threshing are progressing. Barley is yielding a fair crop, but is of poor quality. Corn is looking well. Beans are in excellent condition and will yield a large crop. Harvest will begin soon in Ventura county. Grape picking is progressing in San Diego county and the yield is reported generally light. Walnuts are dropping in some places. Irrigation water is plentiful.

EUREKA SUMMARY.—Crops continue making satisfactory growth. In some localities bean threshing and potato digging are in progress. Oat harvest is nearly completed.

LOS ANGELES SUMMARY.—Cool, foggy weather was favorable to beans; some localities report half a crop. A large crop of almonds is being harvested; serious damage was done by wind in some sections,

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, September 18, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week.....	Minimum Temperature for the Week.....
Eureka.....	.14	.17	.28	.93	62	48
Red Bluff.....	.00	T	.28	.51	102	62
Sacramento.....	.60	T	.06	.21	98	54
San Francisco.....	.00	T	.46	.21	76	50
Fresno.....	.00	T	.23	.23	100	54
Independence.....	.00	.33	.77	.21	92	48
San Luis Obispo.....	.00	.18	T	.25	94	46
Los Angeles.....	.00	.06	T	.10	84	48
San Diego.....	.00	T	.10	.10	70	60
Yuma.....	.00	.22	.02	.62	106	68

It will interest many of our readers to know that there is to be issued shortly a beautifully illustrated book, "The Golden Poppy," which is designed to completely cover the history, literature and botany of our State flower, the California poppy. For fear that some striking illustration, legend, poem, etc., may be omitted, the author, Mr. Emory E. Smith of Palo Alto, president of the State Floral Society, requests all to send him photographs, legends, poems, Indian names or prose quotations that they may have. Due credit will be given for everything original that can be used, and photographs and copy will be returned to sender, if requested. Many will no doubt be glad to do this for the sake of the flower they love so much.



## HORTICULTURE.

### National Protection for American Horticulture.

By R. P. CUNDIFF of Riverside at the recent meeting of Southern California Horticultural Commissioners.

The subject of enacting laws for the protection of our agricultural and horticultural interests against insect pests and plant diseases had its inception in California. The first legislation of this kind was enacted by our State Legislature in the year 1881, and has since been improved until our splendid horticultural law is the result.

The magnificent possibilities of fruit growing were recognized in the early settlement of the State, and it rapidly developed into a very profitable industry. But little attention had been given to the enemies of fruit culture in any part of the United States, partly from the fact that horticulture was practically in its infancy, but mainly from a lack of scientific knowledge of the history and habits of such enemies. As a result, it is not surprising that California should have introduced into the United States some of the injurious insects. Of these, the so-called San Jose scale has caused perhaps more unfavorable comment against our State than any other.

**THE SAN JOSE SCALE.**—From the fact of its easy dissemination over other parts of our country, it has been reported in many of the Eastern States and Canada, and wherever it has gained a foothold, it is recognized as a very destructive pest.

The rapidity with which this insect spreads, and its destructive nature, caused many of the Eastern States to enact laws intended mainly to protect themselves against this pest. These laws have been so improved from time to time that quite a number of the States have what should be very effective protection against the future spread of importation of this or other pests through interstate commerce.

The advantages gained by individual States enacting these laws would be increased many-fold by a system of national quarantine. The importance of having such laws enacted by our National Government will be more readily appreciated when we consider the enormous amount of damage done to crops in the United States by insect pests, plant diseases, noxious weeds, etc.

**AN APPALLING RECORD.**—The insect pests affecting agricultural products in the United States already number over over 600 species, and new ones are continually being imported from other countries.

The damage from this source to agriculture for the year 1899 was estimated at about \$300,000,000, the State of New York alone sustaining a loss of \$26,000,000. These figures are taken from the most reliable sources, and are as nearly correct as it is possible to give. It is estimated that 80% of the damage thus caused was from imported pests.

It may be assumed by some that legislation at this time would be of little value as a protection against the further importation of these enemies, as it might be conjectured that we already have all the worst pests established in the United States. This can easily be proved to be erroneous. The following figures are taken from Prof. T. D. A. Cockrell, entomologist of the New Mexico experiment station, in an article entitled "Danger to American Horticulture from the Introduction of Injurious Insects," published Feb. 15, 1897.

Referring to injurious scale insects, not yet reported in the United States, but liable to be introduced at any time, he names seventeen different varieties affecting citrus fruits, eight affecting the apple, pear and plum, seven affecting the grape vine, five the mulberry, seven the olive, three the cotton plant and six sugar cane. The above list is composed of scale insects which are classed as extremely destructive. Several of them have found their way into this country since the article referred to was written by Prof. Cockrell.

**EFFORT TO SECURE A NATIONAL LAW.**—The first efforts made to induce Congress to enact a national law for the protection of our agricultural and horticultural interests, was in March, 1879. At that time, the Ohio State Horticultural Society issued a call for a conference to be held at Washington, D. C., for the purpose of considering the matter of erecting a more uniform system of State laws bearing upon this subject, as well as to recommend such national legislation as might be deemed wise and effective. About this time, the danger of introducing from Mexico that most dreaded of all pests to citrus culture, the Morellos orange maggot, began to alarm the orchardists of this State. Mr. F. G. Havens, then Horticultural Commissioner of Riverside county, began investigating this pest, and soon after the Agricultural Department at Washington sent an entomologist to Mexico to investigate. His report to the Government fully verified the destructive nature of this insect. Soon after the report made by the Government agent, Mr. Havens drafted a bill and forwarded it to Washington. It was intended to protect our horticultural interests by having all foreign nursery stock carefully inspected at ports of entry, and if found to be infected with dangerous insects or plant diseases, to have same eradicated be-

fore releasing stock, and in event of failure to eradicate the pests the stocks should be destroyed. The bill was also designed to prevent the entry of fruit infected with dangerous insect pests. The passage of this bill was strongly urged by the Secretary of Agriculture, Chief Entomologist L. O. Howard, and many of the leading horticulturists and entomologists of the United States. It was, however, bitterly opposed by the National Association of Nurserymen, who, by misrepresentation and the aid of paid lobbyists, were enabled to defeat the measure. Attempts were again made in the Congress of 1899 and 1900 to have this or a similar bill passed, but failed for the same reasons as above stated.

**OPPOSITION BY EASTERN NURSERYMEN.**—The importation of foreign nursery stock into the United States annually exceeds \$1,000,000 in value. The National Association of Nurserymen is largely composed of men engaged in the business of importing nursery stock, hence their only excuse for opposing the bill must be attributed to purely selfish motives.

Many nurserymen who deal in domestic stock view the matter quite differently from that of the National Association, and have warmly supported the bill, realizing that such legislation would prove a benefit to their business.

It is a well-known fact that more than 80% of the injurious insects and plant diseases imported into this country, affecting horticulture, came to us through the medium of nursery stock. Any one doubting the correctness of this position regarding the attitude of the National Association of Nurserymen should procure a copy of the organ of this association, "The National Nurseryman," published at Rochester, N. Y., bearing date, July, 1901.

This issue is devoted largely to an account of the annual meeting of this association held at Niagara Falls, June the 12th and 13th of this year. Quite a lengthy report of their committee on legislation is given, which abounds in bragadocio at their having succeeded in killing the National Quarantine bill at the last session of Congress. In this report they openly assert that they do not want any legislation along the line of protection to horticulture.

The report also lays much stress upon the great industry they represent, claiming that the nursery business of the United States represents an investment of from \$50,000,000 to \$75,000,000. Taking the outside figure as a limit, how would it compare with the capital invested in horticulture, when seven southern counties of this State have about double that amount invested.

Since the agitation of a national law began, earnest efforts have been made to conciliate the opposition of the nurserymen, believing that it was from a false impression of the effect of such legislation upon their business that induced their opposition. It now appears that further efforts along this line would be useless.

**THE FUTURE.**—This State having taken perhaps the most prominent part in efforts at having a national quarantine law enacted, will naturally be expected to keep up her efforts until success is attained. Interest in the importance of this matter is by no means confined to California. The following States, through their Legislatures, petitioned Congress at its last session to enact a quarantine law: Connecticut, Virginia, Tennessee, Nebraska, Montana, Oregon, West Virginia, Michigan, Texas and California. The Department of Agriculture is also strongly in favor of such legislation. The bill will doubtless come before Congress for action this winter, when a determined and united effort of the horticultural interests of the United States should be made to have the same or a similar measure passed, as the one introduced by Senator Perkins at the last session of Congress and known as Senate bill 2548. The following governments have enacted laws, some of which are absolutely prohibitory, against the admission of nursery stock from the United States in order to protect their countries against the introduction of the "San Jose" scale: Austria, Belgium, British Columbia, Canada, Cape of Good Hope, France, Germany, Netherlands, New Zealand, Switzerland and Turkey. In view of the above facts, is it not time that our Government should realize the justice of the demand for a system of protection for one of our leading industries, instead of allowing this country to be the dumping ground for the insect pests and plant diseases that are continually being brought to us?

### Cover Crops in the Orchard.

At the last meeting of the Oregon Horticultural Society, L. D. Reynolds, commissioner of the State Board of Horticulture for the Second District, read the following paper on "Cover Crops in the Orchard." For several years the writer has been interested in this subject, and has become convinced that the sowing of some crop which will occupy the ground during the winter season will prove of great value in nearly all the bearing orchards of the Willamette valley.

**NITROGEN NEEDED.**—Our long summer season, during which the ground is kept fallow, and the nitrogenizing organisms are storing available plant food, is followed by a long, rainy season which must result in the loss of much of this food unless we can succeed

in growing some crop during this period when the trees are dormant, which will take up and hold these fertilizing elements until they can become available for the use of the tree. The stunted growth and sickly, yellow appearance of the trees in many of our cultivated orchards bear witness that there is need for a nitrogenous fertilizer.

The constant summer-fallowing of the orchard soon results in the destruction of the humus and the soil is no longer loose and moist, but we find it baked and dry, usually covered with large clods which cannot be easily reduced. In our experiments we have tried crimson clover, turnips, rape and vetch. Our first sowing of crimson clover was in September, 1896. By November 1st we had a fine stand in the orchard and were anticipating a crop to plow under. Our hopes were doomed to disappointment, for the severe frosts in the latter part of November did not leave a plant. Our next trials were turnips and rape. While these flourish and give a large amount of green vegetable matter to turn under, yet they have not proved desirable, since we can obtain from some of the leguminous plants an equal amount of foliage and at the same time succeed in making available an increased amount of nitrogen.

**VETCHES.**—On further trial of the crimson clover, we found it possible to obtain a fine growth in time to plow in, early in the spring, but it is rather difficult to obtain a good stand. The common vetch, however, has been found to meet all the requirements. It can be sown later than crimson clover, is nearly always a good stand, makes a good growth during the winter and pushes forward rapidly in the spring, so that one can have a growth of two or three feet in height to turn under by the first of May. A single vetch plant, taken May 1st from the field of a neighbor, who sowed his vetches after his potatoes had been dug, stood over three feet high, and, being carefully removed, was found to have roots which had penetrated the ground twenty-seven inches. In order to secure the best results, the vetches should be plowed under as early in the spring as possible. The vines will then rot rapidly and the soil will retain its moisture.

It has been said, "the cheapest manure a farmer can use is clover seed." And we may say the cheapest manure a fruit grower can use is vetch seed, for while the vetch is storing up nitrogen for the use of our fruit trees, it is also gathering phosphoric acid and potash from the soil and rendering them more available for the use of the roots of the trees.

As the luxuriant growth renders it somewhat difficult to plow in, we have found it convenient to sow the seed only one way between the trees, leaving about three feet in the tree row unsown. This plan makes it possible to use a one-horse plow without difficulty. Sown in this way, fifty pounds of vetch seed is sufficient for an acre.

As is well known, the Petite or French prunes have been very small for several seasons. We believe there would be less complaint in this regard were leguminous plants more frequently grown in the orchards as cover crops, and the trees further assisted by liberal applications of potash.

## FLORIST AND GARDENER.

### Color Study in Petunia Growing.

By MRS. THOMAS GOULD at the Ventura Farmers' Institute.

Our specialty in horticulture, the growing of the finest strains of single and double petunias for seed purposes, is without question one of the most difficult, for the petunia shows a far greater tendency to natural reversion of type than any other flowering plant.

This reversion of the type can only be held in check by the most careful attention to every detail, even from the very inception and preparation of the stock seed, which presupposes knowledge covering years of past experiences.

In this connection let me say that the German petunias (those grown in Germany) were in the first years of our work a decided bete noir to us, through our lack of knowledge concerning them, and I wish to read you a letter which gave me my first feeling of satisfaction concerning the relative degree of excellence of our California grown and foreign grown strains. [The writer read letters from German florists giving the most emphatic approval to California seed for the excellence of the flowers and expressing the opinion that California will soon surpass Germany for reputation in this line.—Ed.]

Many visiting seedsmen have told us that never in Germany, France, England or anywhere have they seen petunias to equal our blossoms.

**SELECTION.**—All inferior types and everything untrue must be rigidly rejected in growing for seed purposes, although for testing purposes in further improvement of existing strains it is sometimes wise to make second tests where one observes even a promise of further advancement. But every plant must approximate the fixed ideal in the originator's mind.

The pollenization of the blossoms demands diligence and extreme care. Every strain must be kept apart



and separate, and many colors of each strain must be kept apart, and the seed product must be blended in the most particular fashion. Every step of the work must be taken with the utmost accuracy and the grower of his own personal knowledge must know that it is accurate.

Our method of pollenization differs from other methods only in our own individuality. As in any other business undertaking, so in this nature study—success crowns only labor which is accurate and painstaking. The notebook and memoranda have been my constant companions, continued throughout the years of study, and many of our plants have quite a line of heredity and consequent distinct individuality. This color study is almost a science in itself, and has opened up a new world to me, wherein it sometimes seems that my hand—I say it with all reverence—is in the hand of Him who maketh all things, who giveth all beauty.

While my study has meant much hard work and self-denial—in fact, a veritable self-apprenticeship for years—it is only through such labor that knowledge comes. Training is indispensable in any art. With a quick perception and passionate love of color, from my earliest childhood I have watched with unabated interest the many changing tints and colorings in the morning and evening skies, the effects of sunshine and shadow chasing each other over our woodland, hilly scenery, for my early youth was passed on the western slope of Caldwell mountain, New Jersey, overlooking a range of the lovely Blue mountains. The morning glory of the cities set in the opposite mountains, as the sun caught and held the crystal window panes; the budding and bursting forest leaves in varied tints of green, from the first delicate tracery in spring to the full foliage of summer and many changing tints of autumn—these were joys of my childhood, the beginning of education for the future work of color pollenization, for without due appreciation of the almost infinite shades of color the floral worker is not likely to produce the brightest results. In this work color has been, of course, a matter of individual taste, and cannot be readily analyzed or resolved into a study of standard colors of strictly normal tones of the pure spectrum hues. Tints and tones almost innumerable, however, are now found in our beautiful blossoms. In working with these living tissues I am well persuaded that the blending of certain colors would produce muddy tones, and have worked for intensification of color, more delicate tintage of color, greater purity of color, with contrasted color harmonies.

## ENTOMOLOGICAL.

### Work of the Ventura County Horticultural Commission.

By J. F. MCINTYRE of Fillmore, at the University Farmers' Institute at Ventura.

About once in three years the Ventura County Horticultural Commission causes an inspection to be made of all the fruit trees in the county, and, when any scale insects are found, we use our best judgment as to what course of treatment to pursue. For instance, red and purple scale are often found just starting on one or two trees in a place, and, as fumigation or spraying seldom, if ever, gets the last one, we take no chances of letting these scales spread and immediately burn the infested trees.

A few years ago the orange, lemon and pepper trees in the town of Ventura were badly infested with hemispherical scale. It was out of the question to try to fumigate or spray the large pepper trees, so we placed the ladybug (*Rhizobius ventralis*) and an internal parasite on this scale, and now these trees are clean and healthy.

The black scale is the worst scale we have to contend with in this county. The treatment of this scale varies in different parts of the county. The commission have tried to introduce every enemy and parasite we can get hold of to destroy this scale, with only partial success. Near the coast the ladybug (*Rhizobius ventralis*) and the internal parasite (*Tomocera Californica*) have done good work; but farther inland it is still necessary to fumigate to hold this scale in check. We will continue to introduce new parasites, and hope that those recently imported by the State Board of Horticulture from Australia, which feed on the half-grown scale, may be effective in destroying this pest.

The brown scale (*Lecanium hesperidum*) seriously threatened the citrus industry about thirty years ago. Two internal parasites (*Coccophagus lecanii* and *Comys bicolor*) have almost exterminated this scale, and when now found is always protected from these parasites by a colony of ants, which feed on the honey dew which the scale exudes. Keep the ants from the tree is the only remedy recommended by the commissioners.

The worst enemy of the deciduous fruits is the San Jose scale. This scale has been held in check and nearly exterminated by the use of the lime, salt and sulphur wash.

The codlin moth is one of the injurious insects that got started in the county before the present Board

of Horticultural Commissioners was appointed, and, being a winged insect, we have found it impossible to exterminate it. Spraying with Paris green just after the blossoms have fallen from the trees, and at proper intervals afterwards, greatly reduces the number of wormy apples and pears.

The woolly aphid is another insect that we have found impossible to exterminate. Kerosene emulsion above ground and bisulphide of carbon under ground has been found most effective. We recommend fruit growers to refuse to buy any apple trees that are not grafted on resistant roots.

The brown apricot scale has never amounted to much in this county, an internal parasite (*Comys fusca*) was probably introduced with the scale and holds it in check.

The lemonpeel scale (*Aspidiotus nerii*) has been in the county for ten years or more, but never does much harm, except to occasionally scare a fruit grower by making him think he has red scale.

The cottony cushion scale no longer needs attention from the commissioners, as the labybug (*Vedalia cardinalis*) is found feeding on it wherever the scale is discovered and quickly disappears. A small orange tree growing in the town of Ventura was found covered with *Chionaspis citri*, the small white scale that is reported to have killed the orange trees in Louisiana. The tree was burned.

It will appear from the foregoing that the work of the commission is, first, to prevent the introduction and spread of any new pests. We would feel very much chagrined to find that any new pest had been introduced and spread beyond our power to exterminate it; and, second, to introduce enemies and parasites that will render any insect pests that we now have comparatively harmless.

Our quarantine regulations are growing more stringent every year. Our laws, ordinances and regulations are about all that can be devised. Our fruit growers are intelligent and ready to co-operate with the commission in preventing the spread of any new pest. We are surrounded by some of the most serious pests that infest citrus trees, and I would impress it on our growers that trees once infested with these pests can never be entirely cleaned without destroying the trees—even the gas treatment does not get the last one. We have tried to save trees infested with purple scale by gassing, and had to give it up and destroy the trees.

Our fruit growers should be exceedingly careful in buying nursery stock from Los Angeles, Santa Barbara or Orange counties. Have the inspector examine the trees before you receive them, and if they have ever been infested with red or purple scale, ship them back to the nurseryman without delay.

FINANCES.—A few hundred dollars per annum now pays all the cost of the Horticultural Commission and all the cost of fumigating, which is only practiced on black scale in this county, while the cost of fumigating in some of our neighboring counties is something amazing. Let me give you a few figures to show how much we are missing in this county: In their last report to the State Board of Horticulture the Los Angeles commissioners reported that they had 1100 fumigating tents at work every night, and estimate that 1,250,000 trees were fumigated last year and that 12,500 citrus trees had been taken out during the year. At an average cost of 12 cents per tree for fumigating, this would amount to \$150,000—not to mention the destruction of 12,000 trees and the cost of inspecting, which would probably cost \$1000 more.

The Orange county commissioners make the statement that last season the expense of fumigating in that county was \$38,500, and this year the cost will be quite \$40,000—all owing to the carelessness and inexperience that allowed the red scale to spread over that county.

Santa Barbara county is depending on the ladybugs, *Orcus chalybeus*, to clean their county from red scale, and the commissioners report that they are sorry to say that the red scale has been on the increase really to a serious extent. In a few years that county will be in the same boat that Los Angeles and Orange counties are in now. They also report purple scale in several orchards, which they expect to hold in check by fumigation. I am just as sure that purple scale will spread over that county, if they depend on fumigation to stop it, as I am sure of anything in this world. Gassing will kill about 90% of the purple scale and the other 10% continue to increase and spread through the orchard and in a short time the whole county will be infested.

Growers everywhere should be careful and call the commissioner's attention to anything new that they may find in the scale line; he will know whether it should be destroyed or is harmless.

## THE DAIRY.

### The Dairy in El Cajon Valley.

By A. T. HAWLEY, at the University Farmers' Institute at El Cajon.

Dairying is a much neglected industry in the El Cajon valley—there being no one who makes dairying an exclusive business. However, there is room for thought and study on this subject for our people.

We all know that most of the old timers who have farmed in our valley have lost money, and, further, that most of them did not keep cows. In many instances they used the tin cow and bought their butter from the grocer. Possibly some of this butter came here from the East, as carload lots do come even to this day.

A READY-MONEY BUSINESS.—You can go into any community where dairying is general and almost without exception will find people prosperous. The reason for this prosperity lies in the fact that the returns are collected daily or weekly, and the people know just about what they may expect to receive, and live accordingly. They are also in position to turn or sell their stock quickly in case they find their expenses exceeding their income. Consequently, we see that the man who puts his money into dairy stock and farming is in position to largely control his market, his output and, in short, his own affairs, whereas we lemon, prune and raisin men need only to stop and think for one sad minute to see how absolutely we control our business!

MILK FOR THE CITY.—Several in our valley and Lakeside have shipped milk to San Diego, but for various reasons we have found it unsatisfactory. During the fall and spring months they would take our milk at fair prices. This is when the tourist and transient trade is heavy in San Diego; but, when the tourist goes, the city milkman begins to cut prices, to complain of bad milk, to claim that he cannot use the night's milk, and, in short, everything goes wrong for the producer. The fact is that the city milkman cannot sell all the milk, and he does not care to make butter, as he can buy it for less money than it costs him to make it, and he escapes the trouble and cost of the work. This butter is shipped into San Diego from Kansas and other States and is held in cold storage and sold whenever it yields a profit.

A LOCAL TRIAL.—In spite of these discouragements, however, I last year bought nearly all the feed for my cows, raised fourteen calves from three to six months old, and from eight cows I netted over the cost of the feed \$340.98. This record is from March 30, 1900, to Feb. 12, 1901. I got my shorts for \$15 in San Diego—a low price—and alfalfa from Lakeside at \$8 per ton. I also got eight milk cows which are included in the test. They cost \$12 and are probably worth \$10 to-day.

Some of the larger of the above-mentioned calves I sold last fall for \$14.50 per head; so it is easy to see that if you could get a fair price for milk and get good cows which will give you something like three gallons per day for ten months in the year, you can do well, even if you buy your feed.

I received 35 cents per 3-gallon can net for the milk excepting what was sold in the valley, which brought 5 cents per quart—to the amount of three quarts daily. Estimating my fourteen calves at \$10 each—for which they would have sold readily—my cows netted me \$490.98, or \$61.37 per head. And yet if you ask a man over \$35 for his pick of your herd, he wants to know if your name is Morgan or Rockefeller.

The only reason I am not selling milk now is owing to the high price of stock cattle. I think I can put the milk into calves, make nearly as much money and avoid the work.

WHAT A CREAMERY WOULD DO.—The crying need of El Cajon valley to-day is a good creamery. Let Lakeside, Santee, Cajon and all surrounding districts join and support some man who is willing to put up a creamery, and gradually it would develop into one of our leading industries and would be a source of comfort and protection to more than one farmer of our valley. It would be a protection because it brings you money all the time, while our other interests do not. It lessens expense for fertilizers, which all must meet, if we continue to grow fruits, and it keeps you and your boys at home evenings doing the chores and enjoying yourselves generally.

The milking of ten cows is no great task, nor is the washing of cans and pails bad if the milk is not allowed to sour. One of the objections in shipping to San Diego was the fact that the milkman would not even rinse out the cans with cold water—to say nothing of washing and scalding them, as he should have done; it was thirty-six hours before the can was returned to us, and frequently the restaurants heat the milk in the cans and scorch them, so the washing is very difficult. With the creamery in our midst this would be all changed. You get the skim milk back for feeding purposes. Your cans can be washed within a few hours and your work considerably lessened because you do not have to meet trains at certain hours.

DAIRY LANDS.—The proper location for our creamery would be at Santee, where there is considerable land suitable for dairy purposes. Where land can be purchased for from \$20 to \$30 per acre and care used in selection, I believe there is money for those who invest and do most of their own work in the dairy. I know there are some farms in our midst that are not suitable for dairying, but I believe that most of our fruit farmers would find it profitable to keep from five to ten cows.

Our valley cows are a mixture of Holstein-Jersey and Durham-Jersey, the object being to get a good flow of milk which will test 4% of butter fat. Were



we to get a creamery, in all probability we would breed largely to the thoroughbred Jersey, as they seem to make the finest butter. However, Guernseys, Holsteins and Durhams are all good milking stock and will do very well to start with.

In this hasty sketch I have not discussed silos, balanced rations, butter tests, etc. The practical application of these would materially increase the profit of our dairy cows. So you will see that, if dairying will pay under existing conditions, what will it do when scientifically handled?

## THE FIELD.

### Profits in Farming.

By F. P. WILLARD at the University Farmers' Institute at Escondido.

There is nothing like selecting an inspiring subject for a topic, either to write about or theorize upon. The word "profits," when used as descriptive of the returns that most of our ranchers have received during the past few years, is likely to call forth a vigorous protest or a pitying smile at our ignorance.

In this paper I do not use the word as descriptive of the difference between cost of production and the amount received in exchange for the production, as does the merchant or manufacturer, but to designate the returns in the necessities of life that the farmer may receive from his labor and his land. The first consideration in all enterprise is to make a living and support ourselves and those depending upon us. Farming is Nature's great workhouse where all humanity may come and, idealistically at least, make a living.

**THE GARDEN.**—There are few farmers who cannot find somewhere on their land at least one acre suitable for gardening; what I mean by gardening is raising "things to eat." The farmer who does not have a kitchen garden somewhere on his land has mistaken his calling. He ought to have sought employment in the basement of some "sky scraper" in one of our big cities, where the sunlight or the soul-inspiring smell of newly turned dirt or the glittering dewdrop shining and smiling on his choice plants never greet him, as at early morning he made his daily rounds looking for the inroads of the busy gopher or to see if a moment's attention might not save from death some plant.

Having selected your garden spot—and here a word as to the selection: Don't go into some hollow or on the northeast side of a high hill where the sunlight only peeps for a short time each day, but upon a slope that, like the sunflower, faces the sun all day long and is looking to see his last rays as he sinks below the western hills only to rise again, marking the dawn of a new day. Sunlight and sun warmth are indispensable to vegetable life and growth.

The first opportunity you have, plow your garden spot and plow it deep. By opportunity I don't mean the first convenient spare time you have, but after the first rains that wet it deep enough to plow—the earlier the better. There is a lot of material lying just on top of the ground—the very top layer of the soil—that has more life and growing material in it than all the rest that lies below, and you want to get this life material down so that the roots of the plants can come in contact with it by growing downward, and also that other dirt may be exposed to Nature's laboratory for the manufacturing process of light and sun heat.

Don't be afraid to plow a second time, or even a third, before planting; the theory of your neighbor, that it wears out the productiveness of the soil to plow and cultivate it, is not true, neither will its productiveness be entirely destroyed by placing upon it all of the old bones, pieces of leather, a few iron scraps, a moderate amount of wood ashes, a generous supply of the stable cleanings—and, if you understand its value as a fertilizer, you will never leave your hen houses with their accumulation to breed mites or lice. Hen-house cleanings is the best fertilizer for the garden produced upon the farm. A little of it goes a long way to turn a barren spot into a hot-house bed. The refuse from the cow and barnyard had best be left upon the top of the ground for the first year, turning it under with the first plowing the second season.

**EARLY WORK.**—Most farmers have had occasion to note how vigorous a volunteer vegetable or cereal grows. Did you ever stop to inquire the reason, or how you might secure the same results in your planting? Some will say it had more moisture; got an earlier start than the sown. While both of these causes exist, the real fact is that its roots penetrated into the soil and came into contact with the moisture that exists below the line of sun evaporation, while the later sown is struggling to maintain its life in the upper and drier strata. When planting garden seed get it into the ground as early as you can, due regard being given as to the kind, and to Jack Frost. In planting late, run deep furrows and plant in the bottom, bringing your plants as close to the moisture line as possible.

Make the attention to your garden a part of your daily routine, not an occasional visit. When you go that way carry your hoe with you; be ever ready to

strike a vigorous blow at a growing weed, or bank up around the roots of some plant that is showing signs of distress. A little to-day, a few minutes to-morrow and the next day, and your garden will furnish food for your family for half the year.

**THE DAIRY END.**—The farmer who has a garden needs a cow. A farmer needs a cow for several reasons, among the least of which is to possess upon his ranch unmistakable evidence that he is a rancher. He needs her for the food that her milk supplies to his children to give them the physical and mental vigor to grow into manhood and womanhood; to prevent so many little mounds in our cemeteries, marking the resting-place of children whose vitality, for want of proper nourishment, was unable to resist the encroachments of disease. Butter and milk supply to the body many things that are required to maintain its normal condition. They help out the cook in many a dainty dish.

The surplus and parings from your garden are always welcome in the ration of your cow. Put them in her manger. Note I say manger. Let me protest against dumping them in her corral on the dirt and refuse to be found there. A well-fed cow has very great objections to dirty or filthy food; besides a cow manufactures her milk from the food she eats. Think of it, my friends; feed a cow on the dumpings from your stable or the slops from hotels and restaurants, and what is your milk made out of?

A word as to the care of the cow: Cleanliness here is indispensable if you want to reach the top round of success. Give plenty of pure, clean water and wholesome food. As to the kind of food: While green food, such as the natural grasses, corn fodder and alfalfa, is supposed to produce the largest results, let me advise you to try plenty of oat hay, cut and cured just before the seed hardens and while the leaves upon the stalk are yet green. The result will astonish you.

A good cow (and don't keep any other, for beef is too high for that) will give a little more milk than an ordinary family will use. There will also be some sour milk. Hogs, you say, will get this. Better give it to your chickens. Put it into some clean vessel tied to a post or stake so that it cannot be turned over, not in any old vessel that happens to be handy which will hold a little of it for a few moments while the hens scramble over each other in an endeavor to get a few drops as it sinks into the refuse that is usually found in a chicken run.

**THE CHICKEN DEPARTMENT.**—But how about the chickens and chicken yard? Have you any chickens? What do you have them for—to throw stones at and swear at because they roost on your harness peg or wagon seat, since they have no other bed? Some few years ago a friend told me that the egg industry of the United States was more valuable than its silver industry—that is, that the barnyard hen produced more money than all the silver mines in the country. I investigated and found it to be true. My experience with the hen in the Escondido valley will serve to illustrate her value as a profit in farming. Two dozen Barred Plymouth Rock hens lay enough eggs per annum to pay all of my taxes on six acres of land and the dwelling house, including the terrible irrigation tax that our people take such delight in telling strangers about. My actual cash profits from sales of eggs at the store, from an average of fifty hens, is about \$70 per annum or about \$1.40 per hen, and these figures do not include the home consumption of a family of seven, besides which we have from sixty to seventy-five roosters on our table during the year.

As to the care of the hen: Cleanliness, proper food and good housing are indispensable. Another important consideration is that sixty hens, divided up into pens of fifteen to twenty each, will lay more eggs when properly cared for and fed than 120 left to take care of themselves, roost in any old place or huddled up in an old, draft-swept barn.

**A CASE IN POINT.**—One experience to illustrate: Four or five years ago I had twenty-six hens in one pen, built as a lean-to against the barn. I fed them well, but only found three or four eggs a day in the nests. The result did not suit me. I procured two big dry goods boxes, put some straw in the bottom of each, poured a liberal quantity of liquid lice killer over the straw, caught the hens, put them into the boxes and covered them up for twenty-four hours. I then tore down the pens and moved them away from the barn (with its foul smells) and erected two pens instead of one on the sunny side of a hill slope. I thoroughly whitewashed the houses, with some carbolic acid in the whitewash, put in new nests and moved my hens into their new quarters, dividing them into two flocks. With the same feed as before, these same hens under the changed conditions gave me from nineteen to twenty-four eggs per day for over four months when eggs were selling at from 20 to 25 cents per dozen.

**COLONIES.**—During the past four years I have kept as many as 100 hens at a time on a run of about two acres, with four roosting pens. I get better results from sixty to seventy hens on the same runs than I did from the 100. I find that one dozen hens, well cared for, give better results than twenty left to take care of themselves.

**PROFITS AGAIN.**—I headed this paper "Profits in Farming" with the intention of giving results rather than trying to tell how to attain them. There are

more self-made farmers than in any other profession. Farming is as much a profession as the practice of medicine or of the law. If our farmers would do more thinking and endeavor to make the farm serve its true purpose, there would be less distress in the world and there would be less complaining about the prices of the productions raised by the farmers—in fact, the farmer would become indifferent as to what was offered for his crops, because he would not have to sell them in order to buy food. The true aim of the farmer should be to make his farm produce the food that he needs for his table. Raise all you need to live upon. Don't get the idea into your head of raising a single crop of grain, lemons, oranges or fruits, and by selling it buy what your family needs to live upon. That is exactly what is the trouble to-day with prices—overproduction in the line of easiest raised produce, whereas if most of the farmers raised just what they wanted to live upon they would in no wise be affected if they were unable to sell the crop as soon as harvested for as much as it cost to raise. No groceryman would be threatening to shut off food supplies unless at once he had hay and grain stored subject to his orders. Friends, farm for a living, not as you are doing, to support others by handling and selling your productions, while you labor and slave your life away paying freights, interest and commissions.

## THE APIARY.

### The Best Bee for Southern California.

By G. M. HAWLEY of El Cajon at the University Farmers' Institute.

In the year 1869 Messrs. Harbison and Clark brought bees to southern California. They had Italians and black bees and hybrids of these two races. In about the year 1875 a number of Cyprians were introduced. Being excessively fertile breeders and great swarmers, and naturally taking to the rocks, trees and a wild state more than other bees, they have gradually overrun the country until their breed predominates. They are nervous, cross bees that smoke will not subdue. They are easily incited to robbing and make the work in an apiary very disagreeable.

Our honey flow is usually moderate and of long duration, giving the queen great opportunity for feeding, and these bees seem to improve this opportunity, filling the hive body, and super as well, unless restrained by a queen excluder. To rear a super full of brood requires nearly a super full of honey; and had not the brood been there, honey would have taken its place, and the result on dry years is that a large portion of the bees starve. This I believe to be the cause of the depression of this industry, resulting from a series of dry years. The most successful way to manage these bees is to use a queen excluder and never allow the supers to become crowded with honey. Had California confined herself to the Italian bee, the results would have been different and there are certain strains that are better adapted to our conditions than others.

**GOLDEN ITALIANS.**—Mr. G. M. Doolittle, whom I consider the best practical beekeeper in the world, has succeeded in raising a strain of Golden Italians that seems to fill the bill exactly, and I have some of them. They are practically non-swarming bees. I did not have a swarm from them this season. They are inclined to breed up more slowly in spring, and are therefore less liable to get caught without brood during a spell of cold, rainy weather. And yet they were the earliest in storing surplus honey.

They are bees of much longer flight. During the time that black sage was in bloom they went from three to five miles and got the workers white honey and their cappings were beautifully snow-white, while the others were dark and the honey was gathered from mustard and other plants nearer home, and not equal to the sage. They are gentle, quiet, beautiful bees, not inclined to rob, yet able to protect their homes. These bees are in my orchard and we cultivate next to them. There is a road not twenty feet from the end of my apiary on which people drive, and yet we have no accidents. Had each of my sixty colonies been of this strain, I would have had twelve tons of honey instead of eight.

**QUEEN REARING.**—With reference to queen rearing, there are many methods. [Mr. Hawley illustrated this part of his paper with specimens.] Mr. Alley's method is probably as simple as any, but not the best, as it is not following nature. He deprives a colony of its queen and all its brood and then gives it only eggs from his breeding queen. The Doolittle method I believe to be the only scientific one outside of natural swarming. This consists of making queen cell cups and fastening them to a stick that will fit inside of a brood frame; then by removing a queen cell that is unsealed, and taking from it a drop of royal jelly as large as a B B shot, it can be placed in the bottom of one of the prepared queen cells. One queen cell will usually furnish enough for fifteen or more prepared cells. Then by removing a frame of brood from your breeding colony, in which eggs are just hatching, with a toothpick properly fixed, these little worms can be removed and transferred to the



queen cells prepared for them. These are then placed in an upper story of a strong colony, having a queen excluder between the two to keep the queen below. The upper story should contain some unsealed brood. Usually a large portion of these cells will be accepted and finished, and, if done during a honey flow, will be as large and fine as if raised by natural swarming. On or before the tenth day it will be necessary to form nuclei to the number of queen cells you may have. This is done by taking two or more frames of brood and honey with the attending bees from colonies that can spare them, placing them to one side in an empty hive, putting a division board next to them, thereby making a small hive. Then a queen cell enclosed in queen cell protector is given them. The hive is then moved to the location where you wish it to remain and the entrance closed for a couple of days.

## Agricultural Review.

### ALAMEDA.

**RAISE IN PRICE OF BEETS.**—Niles Herald: The Alameda Sugar Co. has given notice to the growers that the price of beets will be raised from the \$4.50 per ton rate paid for several years past to \$4.75. The beets this season are by far the richest in saccharine matter that have come into the factory for years, and the result is a greatly increased percentage of sugar manufactured. A new warehouse is being erected for storage purposes. Beets are now arriving in large quantities. About twelve carloads a day come from Pleasanton, while as many more come in by teams from this valley, and about ten carloads by rail via Oakland.

### BUTTE.

**AMONG THE WAREHOUSES.**—Gridley Herald: The grain hauling season is about over and within a few days the last loads will have been brought, so far as this immediate section goes. In the five buildings used for storing grain in Gridley there is now piled in the neighborhood of 16,000 tons of wheat, or about 232,000 sacks. While considerable of this wheat has been sold, but little has been shipped, owing to the strike among the laborers at Port Costa and to the difficulty in getting cars, which have been reserved as far as possible to move fruit. The barley crop has been up to the average and one building is practically full of that grain. The wheat crop is the largest since 1899, and considerably above the average.

### CONTRA COSTA.

**PLENTY OF WHEAT.**—Antioch Ledger: It is estimated that between 300,000 and 400,000 sacks of wheat will be produced this year between Bay Point and Byron. This will bring considerable gold into the district, and if the farmers could receive figures little better than the present quotations they would feel as if they had been amply repaid for a hard year's work.

### FRESNO.

**BIG WATERMELONS.**—Fresno Republican: Terrence Reilly brought a monster watermelon Friday from his ranch. The melon tipped the scales at seventy-five pounds, and, what is more astonishing, there were two others of equal size on the same vine.

### GLENN.

**SOME PRIZE ORANGES.**—Orland Register: Lately a cluster of oranges was brought to this office, the smallest of which measured ten inches around—pretty good size, considering that they have not yet attained more than half their growth. The limb was from a tree in the grove of G. D. Mecum and was broken off accidentally.

### LOS ANGELES.

**FRUIT EXCHANGE.**—Pomona Progress: The new Pomona Fruit Exchange directors organized Monday evening by electing J. T. Brady president, J. H. Graber vice-president, F. K. Adams secretary and manager and F. E. Adams treasurer. The report of Manager F. K. Adams showed that 525 cars were shipped during the year, being 109 cars more than for the previous twelve months. There was a good deal of interest manifested, and much discussion as to the best method of handling fruit. Strong action was taken to compel stockholders to handle their fruit more carefully—in the matter of picking and, more particularly, in the hauling of the fruit to the packing house. It has been clearly demonstrated that the fruit should be covered and hauled on springs.

### MENDOCINO.

**THE HOP YIELD.**—Ukiah Dispatch:

Democrat: There are in the valley between 800 and 1000 acres in hops, and the output of green hops will aggregate 4,000,000 pounds. The price paid for picking is 1 cent per pound, so fully \$40,000 will be distributed among the hop pickers this year. There are fully 3000 pickers in the fields and they will average about 100 pounds of hops per day. The output of dried hops will probably be 1,400,000 pounds. Growers are expecting from 12 to 15 cents per pound.

### ORANGE.

**HONEY MARKET STRONGER.**—Santa Ana Blade: The honey market is growing stronger and it is quite likely those producers who have held their honey in hopes of getting a higher price will realize their hopes. Some honey has been sold at from 4½ cents to 4¼ cents per pound, and those who are holding see no reason why this figure should not be advanced to the price which prevailed last year. A prominent bee man states that he believes the present low price is due in a measure to the newspaper reports that the crop in the southern counties is unusually large, and while he does not deny that the crop is a good one he thinks it has been somewhat exaggerated. In bee sections of the East where honey is usually produced in large quantities the yield this year is small, and this fact leads local men to believe that they should realize a better figure than now quoted.

### PLACER.

**FRUIT SHIPMENTS.**—Newcastle News: This is the heavy week for Levi Cling peach shipments. Large quantities are daily being forwarded to the canneries. Salways are still moving quite freely, but after this week shipments will be considerably lighter. Up to last Saturday the Eastern shipments were still below the same date of a year ago, aggregating 742 cars, against 811 cars for corresponding period last season.

### RIVERSIDE.

**PINEAPPLES GROWN SUCCESSFULLY.**—Los Angeles Herald: The success of one man in producing a crop of pineapples in Riverside will arouse fruit growers in a hundred other localities in southern California. The honor of making this notable achievement belongs to W. T. Curtis, who resides in Riverside. His "pinery" contains 200 plants and some of them bear fruit, which is now half ripe and of good quality. His success is so satisfactory that he will set out a much larger number next season. He prefers the Cayennes, Red Spanish and Abakas varieties.

**BARLEY CONDITIONS IN HEMET VALLEY.**—Hemet News: In the early part of the season a big rancher was offered 57½ cents for barley. He determined to pile it up in his warehouse. Since then the price has advanced to 60 cents. It is said even 70 cents has been offered. The barley market is strong and healthy. Compared with former years, the acreage planted to barley is very small.

### SACRAMENTO.

**PRIZE BUNCH OF GRAPES.**—Record-Union: G. P. Curtis of Sacramento, while looking over his vineyard near the County Hospital yesterday, made a discovery that nearly took his breath away. Hidden among the foliage was a bunch of grapes of the Seedless Sultana variety that weighed seven and a quarter pounds. Mr. Curtis regrets that he did not make the discovery two weeks ago, so that he might have exhibited the grapes at the State Fair.

### SAN JOAQUIN.

**BEANS INJURED BY FROST.**—Lodi Sentinel: J. B. Meloche returned from an inspection of the big potato and bean districts of this county. He estimates that from frosts which occurred two nights recently the loss will be from 50% to 75% of the crop, and it means a loss of fully \$250,000. Late beans and potatoes have suffered so badly that there can be no recovery, it being so late in the season. A frost at this time of the year is almost unheard of.

**GOOD RETURNS FOR TOKAY GRAPES.**—Lodi Sentinel: The fruit shipments at the railroad yards still remain brisk. W. J. Thomayer, agent for the Producers' Fruit Co., realized the following prices on a car shipped from Lodi on August 31st, and sold in Chicago on the 10th inst.: Tokays, single crates, \$1.10 to \$1.90, average \$1.50; Tokay clusters, \$1.95 to \$2.20, average \$2.09. The car grossed \$1570.

### SANTA BARBARA.

**LARGE APPLES.**—Santa Barbara Press: Three large apples, weighing three pounds, were raised by Geo. M. Williams at his place in Goleta.

**GRAIN PILED SKY HIGH.**—Santa Maria Graphic: At the depot grain fills every available bit of storage space and is rapidly filling the grounds surrounding. Never before was there such a quantity as at this time, and the question of removal is

taxing the brains of those who have that task to do. It would be better if the farmers would store it themselves until the congestion could be relieved, but evidently they think differently, and each succeeding day sees the immense piles grow until the handlers are at their wit's end finding places to store it.

### SANTA CLARA.

**QUAIL RAVAGE VINEYARDS.**—San Jose Mercury: Reports from various parts of the country are to the effect that quail are more plentiful than for years. They are more numerous in the hills to the west of the city, where they have for the past three weeks been making great depredations on the vineyards. The grape crop was unusually light this year and the inroads of the quail on the crops has been so great that in some vineyards the grapes are not worth the picking. Several of the farmers have protested and have made statements that they were going to commence to shoot them in order to protect themselves.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Sept. 12: Large quantities of Bellefleurs are being picked for cold storage orders.—Shipments of Red Pearmain for Australia and South America have been made this week.—Up to last night twenty-two cars of apples and ten cars of prunes and pears had been shipped East.—Los Angeles continues to draw heavily on this valley for apples. It is buying more than ever before at this time of the year.—The strawberry crop has been light for several weeks, but it is coming on again, and before the close of the month it is expected that shipments will be very heavy.—The first car of apples for this season for the British trade went out Monday night. It was a carload of White Pippins, and was shipped by Scurich Bros. to a London firm. It is the earliest shipment of apples ever made from here to the British market.

### SOLANO.

**LARGE PEACHES.**—Vacaville Reporter: J. & I. Blum have a large force of men at work in their large cured-fruit warehouse, packing, grading and shipping this year's crop. To get a really good idea of the size and quality of Vaca valley fruit, a person should pay a visit to this big establishment. A few days ago a lot of Elberta peaches were received that, before drying, weighed from 1 to 1½ pounds each. Cured, they are almost as large as the palm of the hand.

### SONOMA.

**HOP NOTES.**—Sonoma County Farmer: President J. W. Hall of the Hop Growers' Association started to picking light-handed last week, the hops being slow about ripening. Hands are making good wages, the best average he has experienced. He prefers the high pole system, because it gives more hops on good ground, and they are cleaner and easier to gather. President Hall gives the output for 1899 at 18,000 bales, with 9000 bales last year, and estimates the yield for Sonoma county this year at 12,000 to 14,000 bales, which will be of excellent quality if the weather continues favorable.

### STANISLAUS.

**A BIG BARN.**—Modesto Herald: A barn to be erected on the Winters ranch, near Crow's Landing, in the near future will in all likelihood be the largest structure of the kind in the county. The main building will be 250 feet in length and 30 feet wide, and 20-foot sheds will extend the full length on each side. The barn is designed for the storage and feeding of hay. The ranch is in alfalfa, producing vast quantities of fine hay, which is to be fed to beef cattle this winter.

### SUTTER.

**GOOD PRICES FOR SHEEP.**—Sutter Independent: At the Simpson sale in this county last Thursday, Southdown sheep sold as high as \$5.25 per head. This stock was large and in excellent condition. The bidders were anxious to obtain the sheep for breeding and were willing to pay fancy prices.

**WOOD IN DEMAND.**—Sutter Independent: People are paying almost any price for oak wood this season. There seems to be little wood in the county and it is selling at fancy prices. Oak ranges from \$2.59 to \$2.75 per tier, cottonwood from \$2 to \$2.25 and oak chunks from \$2.25 to \$2.50.

**A PROFITABLE ORCHARD.**—Marysville Democrat: Julian Trembly, a well-known resident of Marysville, owns a small orchard and vineyard near Yuba City. He planted the trees and vines and has given them care from that time to the present. From eight acres of Bartlett pear trees he has just finished picking 77 tons of nice pears, which he sold for \$2100. This is a fraction less than \$300 an acre, and he has performed the larger part of the labor. He has two acres of Tokay grapes and has just sold them for

\$200, and the purchaser picks the product and hauls them away. This shows an income of \$2300 from ten acres, of which he has \$2000 net to show for his labor and investment.

**A LARGE PEAR.**—Sutter County Farmer: A pear was picked in the orchard of T. B. Hull, near Tudor, recently which weighed two pounds and measured 15 inches in circumference one way and 16 inches the other.

### TEHAMA.

**HEAVY LOSSES FROM HOG CHOLERA.**—Red Bluff News: M. Gonzales' loss of swine from hog cholera has been considerable, the exact number that died from this cause being 223 head. When the disease first broke out among them he was away from home working with a harvesting outfit, and when notified returned to his home and tried to save them. Of his whole lot he found only 40 unafflicted, and these he separated from the band. This lot and three others is all he now has from a band of 266. Out of 126 head of hogs that he expected to sell in December, all of which had the disease, he saved only three head. The others that died were large and small pigs and the number he lost was an even hundred, making a total loss of 223 head.

**FEEDING VALUE OF ALFALFA.**—Tulare Register: The cow was a graded Jersey and gave forty pounds of milk daily which tested 5.10% butter fat, or 2.04 pounds per day. This in the thirty days amounted to 61.2 pounds, which at 20 cents gave a net profit of \$12.24. The skim milk was sold at the rate of 20 cents per 100 pounds, and during the thirty days there was 1080 pounds of this product which amounted to \$2.16, making a total of \$14.40 produced in a month. The cost of milking, caring for the cow and carrying the milk to the creamery was estimated at \$1.90, leaving a balance of \$12.50. The cow consumed 900 pounds of alfalfa hay during the time, without any additional feed. This 900 pounds of hay therefore produced \$12.50, or at the rate of \$27.80 per ton, which of course will vary in proportion to the amount of butter fat in any other cow's milk.

**SHIPPING PRUNES.**—Red Bluff News: A force of fifteen people is engaged in dipping, boxing and loading prunes at the packing house located here. Recently 1000 boxes of fifty-five pounds each were packed and placed in a large box car. This lot is destined for Hamburg, Germany. Orders are on hand for twelve more carloads.

### VENTURA.

The sugar beet yield of Ventura county is estimated at 105,000 tons finished product, from an area of 11,000 acres. Farmers have been receiving \$5 per ton. The irrigated lands have produced, on the average, an amount one-third larger than those not irrigated, and the percentage of saccharine has been equally high.

### YOLO.

**APRICOT PITS.**—Solano Republican: Ernst Luehning has purchased about 100 tons of apricot pits at Winters and they are being cracked there. The price paid, we understand, was \$14 per ton. Mr. Luehning says the price was too high to be profitable and that lower prices will prevail next season. They will be exported to Germany after being cracked and prepared.

**BIG PRICES FOR PEARS.**—Woodland Democrat: The Blowers estate has received returns for a carload of pears sold in New York on the 3d of September. The car contained 640 boxes and the gross price was \$2138. This is considered extraordinary.

### YUBA.

**EXTRA FINE PEACHES.**—Marysville Democrat: About 700 tons of peaches were picked from the trees of the orchard of White, Cooley & Cutts this season, of which about 450 tons were delivered to the canneries. They were extra fine, owing to the trees having been thoroughly irrigated up to a short time before picking. These peaches were sought by canners and many of them were put in glass for exhibition purposes.

## Horse Owners! Use

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## THE HOME CIRCLE.

## Nobility.

It is not that the mountains make the men,  
In solitary grandeur, but apart—  
The towering hilltops can but serve to start  
A sleeping nobleness to life again.  
The great-souled natures find their province when  
They join the toilers in the street, the mart,  
Their honest, rugged sturdiness of heart  
Kindling responsiveness unstirred till then.  
For such is not the narrow, binding creed,  
Nor struggle to excel at others' cost—  
The bickering selfish strife to win who can.  
On them the Pharisaic cult is lost;  
Theirs is to seek and help the crying need,  
To stir in all the majesty of man.

—Frederick W. Memmott.

## Fate.

"There is no fate beyond our wills," you say—  
My little bird knows better far than you;  
See how he beats against his prison bars  
Those radiant wings that might have scaled the blue.

\* \* \* \* \*  
But I can take his fate within my hand,  
His prison door I open, swift he flies,  
Far, far away into the deep blue skies,  
And this is fate. We may not understand,  
But yet we feel it. Higher than the stars  
And stronger than our wills, some Power there is  
That rules us, and that moulds our destinies,  
And fastens and unlocks our prison bars.

—Helen G. Hawthorne.

## Wives in the Sere.

## I.

Never a careworn wife but shows,  
If a joy suffuse her,  
Something beautiful to those  
Patient to pursue her—  
Some one charm the world unknowns,  
Precious to a muser;  
Haply what, ere years were foes,  
Moved her mate to choose her.

## II.

But, be it a hint of rose  
That an instant hues her,  
Or some early light or pose  
Wherewith thought renews her—  
Seen by him at full, ere woes  
Practiced to abuse her—  
Sparsely comes it, swiftly goes,  
Time again subdues her.

—Thomas Hardy.

## An Emissary of Love.

Little Mrs. Minturn was dusting the chairs on her piazza. She had a voluminous cheesecloth duster, soft as wool from long use and frequent washing, and she swept it over and under and around the three chairs on the piazza with the same pains that she took with her parlor furniture itself. Every team that passed in the powdery road sent a cloud of dust over the piazza, but that did not disturb Mrs. Minturn. It was her custom to dust the chairs on the porch every morning after sweeping and dusting her kitchen, and she never failed to do it so long as her husband insisted on having the chairs stand there, which was generally from the first of April until the last of November. Even when the snow was driving over them in the late fall and the wild wind itself was dusting them as no softest and most searching dustcloth could, Mrs. Minturn would come forth regularly to tip forward the porch chairs and sweep over and under and around them with her cheesecloth. It was simply one of those services which she had learned to pay religiously at the altar of immaculate neatness—an altar before which she worshiped daily. On this dry and tindery summer morning, when the whole landscape seemed blowing away in dust and haze, Mrs. Minturn went a step farther than usual in her Partingtonian zeal. She dusted the pillars of the porch as high as she could reach, and then she stepped down, in an absent-minded way, and dusted the smooth bole of a maple tree that stood close to the house. It was while she was gravely

flourishing her cheesecloth around the trunk of the tree that she heard Adna Lewis panting in the distance. Adna was the village station agent, and whenever he came up the hill from the depot to "the street" his panting could be heard a long distance away. Adna was large-framed and fleshy and asthmatic. His breath was wholly inadequate to his body and yet he seemed to regard the disparity with entire unconcern, never riding when he could walk, and always being in "such a pesky hurry," as he expressed it, that he must travel at the most rapid pace permitted him by nature.

He was laboring up hill from the depot this morning, with a telegram in his hand. The receipt of a telegram at Jericho was such a rare event that Adna always delivered the message himself, in addition to taking it off the wire—and this quite without regard to the extreme improbability of another message arriving in his absence. He would invariably lock his little ticket office and march up to "the street" as soon after receiving a telegram as his other duties would allow. And so the villagers used to wonder, with country people's vague dread of telegrams, who was to be the victim when they heard Adna Lewis panting up the hill in mid-morning or mid-afternoon.

Adna came straight up the street toward the Minturn house this morning, his shirt sleeves fluttering in the dry, hot wind. Mrs. Minturn stood watching him with a kind of helpless fascination, her dustcloth still resting in one hand against the tree.

"Wal—I swan!" exclaimed Adna, approaching. "Dustin' all outdoors—be ye?"

Little Mrs. Minturn's smile was forced as she nodded her head. It seemed to her no time to joke when a man was approaching with a telegram in his hand. "Comin' here, Adny?" she asked anxiously.

"Yep. Got a—telegram for the—schoolmaster. Bein' Sat'day, I—thought I'd find him to—his boardin' place."

"No, he ain't here, to-day, Adny," replied Mrs. Minturn, relieved to know that the telegram was not for her husband or herself. "He's off fishin' up to Dodd's pond. Started fore daylight. Went all alone, too."

"Hum!" said Adna Lewis reflectively. "Dodd's pond, eh? That's a long way off—upward of 12 miles. Go with a team?"

"Yes."

"Say when he was comin' back?"

"Probably not till 9 or half-past to-night. Said he was goin' to drive back in the cool of the evenin'."

"Sho!" ejaculated Adna. "Now that's bad! You see, Mis' Minturn, I know what's in that telegram—of course. It says: 'Yours received. On my way home to Denver. Meet me Lapham Junction 2:30 to-day. Florence.' Now, that looks to me kind of urgent—don't it to you? 'Florence,' I take it, 's that gal they say has jilted him. Now something's happened that makes her ready to patch it up, per'aps, if Harris comes right to the scratch, duly prompt, humble, and so forth. And there he is 12 miles away in the woods to Dodd's pond, and the train leaves for Lapham Junction at 11:45. He won't be there. She'll be in an awful huff—and, prob'ly, that'll be end o' the hull thing."

"Dear, dear, dear!" exclaimed Mrs. Minturn. Her face was full of motherly distress. "It's such a pity, Adny!" she cried. "Poor Harris—and he's so broke up over it! You jest ought to see how he's lost flesh. Goes mopin' around and can't eat hardly a thing. Forgets what he was going to do the minute he sets out to do it. Won't set with us in the evenin'—sets in his room. He's took her picture out o' the frame on his table and hid it away somewheres. Poor Harris—if he'd only ben expectin' a telegram! There ain't no way we can git him to Lapham Junction to-day, is there, Adny?"

"Nop—not 's I see," replied the station agent gloomily. "The fastest hoss couldn't get to the pond and git him back by train time. And them hill roads are awful!"

"Adny!" exclaimed little Mrs. Min-

turn with sudden resolution, "I'm goin' to Lapham Junction myself!"

"What!" cried the station agent, incredulously. "You? You hain't ben away f'om home for fifteen years!"

"I know it, Adny—I know it!" replied the little gray-haired woman. "I never set foot on a train of cars but once, and that was when the road was first built and my husband wanted me to go with him and the other stockholders and their wives on the openin' excursion. I was shook up so then that I hain't well got over it yit, and I vowed I'd never ride on the cars again. But I don't care, Adny. I'm goin' now, sure! I'm a-goin' to do it for Harris' sake. Why, he's jest like one o' my own boys, Adny, the way I feel toward him. I'm a-goin' to see that gal and explain things. I'd know her, from her picture, in a minute. 'F I can set things right between Harris and her I'm a-goin' to do it. Poor boy! I jest wish she could see how it's wore on him. The only reason he went off fishin' to-day was to git away from folks and be alone where the' wouldn't nobody see him. He won't fish none, I warrant you! Why, the crazy-headed boy went off without diggin' a mite o' bait!"

Adna Lewis chuckled softly. This was a situation that appealed to him.

"Git a ticket to Lapham Junction all ready for me, Adny," admonished Mrs. Minturn, folding her dustcloth and turning toward the house. "I wouldn't miss that train for anything! I'll jest set out some cold vittles for Hiram, and leave a note for him, and change my dress, and then I'll come right down to the deepo. Land! If I could only set things right for Harris, how pleased I'd be!"

An hour and a quarter before train time Mrs. Minturn hurried into the little Jericho station and bought her ticket for Lapham Junction. She wore her best Sunday dress and bonnet and carried a little old-fashioned "reticule," covered with black beads. In this bag she had put a slender luncheon, done up in brown paper, two extra handkerchiefs, a bottle of smelling salts, a bottle of painkiller and a folded sheet of paper, on which were written her name and address, with full directions for conveying her body home in case she should be killed.

She put her ticket into her purse and her purse into the capacious pocket of her Sunday dress, and sat down, perfectly contented, to wait for the train. It did not concern her that she was an hour too early. The only thing that she had feared was that she might be a minute too late. The sweet careworn old face was placid and hopeful as she sat looking out of the depot window at familiar fields and woods, which, somehow, she hardly recognized from this untoward point of view. She was full of a great and prayerful desire to set matters right between the young principal of the village academy and this girl, whose picture had stood on his table ever since he came to board with the Minturns. In some way there had been a falling out between them. She knew it the very day the unfortunate letter had come from Florence—she knew it from Harris' face. Then in a few days the postmaster knew it, because the letters between the lovers stopped. Then the whole village knew it; for what the country postmaster knows, everybody knows. Mrs. Minturn had gone into the pantry and cried when the picture of Florence disappeared from Harris' table. She did not look about for it in his room, as some women might have done perhaps. But she knew perfectly well where it was without looking. It was between the leaves of Harris' Bible, in his trunk.

At length the train for Lapham Junction arrived at Jericho depot, and Adna Lewis, in spite of his habitual whirlwind of "pesky hurry" at such a moment, found time to assist Mrs. Minturn aboard the dreaded cars and admonish the conductor to be sure and see that she got safely off at the Junction. The last thing Adna saw as the train moved slowly away was the pale but determined face of the little peacemaker, pressed against the window, gazing back at her beloved home.

Florence Appleton had an hour to wait at Lapham Junction. The train

from Jericho was due to arrive only twenty minutes before she must leave on the west bound express. If Harris came, there would be, perhaps, fifteen minutes for them to undo the terrible tangle which had come about in the course of correspondence, and which letters had only served to make inextricably worse. But what cannot love do in a minute, nay, in a second, with the help of propinquity and the meeting of young, eloquent eyes! It would all depend, thought Florence, upon other things than words, than arguments, than explanations. It would depend upon the subtle messages that passed between their souls, when they stood once more face to face. For her own part the throbbing of her heart told her that love would not have to knock long nor hard at its gates, if he came with the right look and word. Ah, this pain of estrangement! It had written itself unmistakably in the girl's fair young face also.

The train from Jericho pulled in at the Junction exactly on time. Florence had been pacing up and down the platform for ten minutes, listening and looking for it. Now her eyes devoured with eagerness every passenger who alighted, and her color came and went with alternate expectation and disappointment. Harris had not come! She saw the conductor helping the last passenger down the steps—a little, gray-haired woman, wearing an old-fashioned gown and bonnet and carrying a black reticule in her hand. Tears of bitter disappointment and chagrin sprang to the girl's eyes, but she dashed them away, whirled on her heel and was about to re-enter the station, when a light touch fell on her arm.

She turned and with the anguish and self-pity and suppressed tears still in them, her eyes met the soft, gentle, pleading, yet desperately earnest look of the old lady in the odd gown. Ah! If love had only come looking into her eyes like that! How easily all had been righted.

"Excuse me," said the little, gray-haired woman, "but is your first name Florence, and do you know anybody by the name of Harris Mills?"

A look of blushing, swift surprise, followed by one of reserve and almost resentment, leaped into the girl's blue eyes. How came this woman to know her secret? What did it all mean? Could Harris have sent her? Perhaps—and the blue eyes softened a little—perhaps he was sick!

"Yes," she answered frankly, "my name is Florence Appleton. I know Mr. Mills, and was expecting him by this train. Has he sent any message by you?"

"No," replied Mrs. Minturn.

The girl drew herself up haughtily. "Why do you presume to address me then?" she demanded in a cold voice. "I have no idea who you are."

"He couldn't come," replied the emissary of Love quietly. "He was away for all day. He didn't get your telegram. So I come for him. He boards with me. I hain't rode on the cars for fifteen years, and I vowed I'd never ride on 'em again; but when I see that Harris couldn't git here no ways I come for him. I come to tell you that you're killin' him—jest killin' him, sure as the world, poor boy! He hain't ben himself sence he took your picture out o' the frame and hid it away somewheres. He's jest goin' the way that I've seen lots of 'em go, when they love the way he loves, and git jilted. They git paler and paler and thinner and thinner, and then they go into a decline and consumption or somethin' gits hold of 'em, and that's the last. You're killin' him jest the same way I've—"

"Stop! Don't say that," cried the girl, clutching Mrs. Minturn's arm with a trembling hand. "Don't say that! You'll kill me if you do. You talk as if the suffering was all his. Don't you believe I have suffered too? Don't you think love-sickness can kill a woman as well as a man? What right have you to accuse me of being any more to blame than he is? What right have you to say that I jilted him, when I—when I—"

The proud, sweet young face quivered; the little gray-gloved hands went up to hide it; the tense voice broke into



shaken sobs. Little Mrs. Minturn said nothing, but slipped her arms gently about the girl's waist. The next instant Florence Appleton was sobbing on her shoulder. They two were alone on the station platform. All the other passengers had gone inside, and the train for Jericho had backed away and disappeared.

"There! There!" said Mrs. Minturn, at length, when she had let the girl ease her heart a little. "Harris loves you most to death, or I shouldn't have come, for his sake, to tell you so. It doesn't make any difference who's to blame, now that it's all right. I'm awful glad I come! Harris'll be so glad, when the gits home to-night!"

A shrill whistle woke the echoes of the hills around the lonely junction.

"Why, that must be my train!" cried the girl, lifting her head. I must hurry—but stop! Take this to Harris, and tell him I will write to him on the train this afternoon. He will get it tomorrow."

She unclasped a little pin from the collar of her dress, and handed it to Mrs. Minturn. It was a topaz in a dainty gold setting—and in the language of gems the topaz is for fidelity!

The hissing express train stopped for a moment and took a slight girlish figure on board. Then it thundered away again, with a fair face shining back at Love's emissary through a mist of happy tears.—New York Evening Post.

### Corpulence.

The amount of fat normally present in the human body varies with age. It is considerable in infancy, slight in childhood, least of all from the fifteenth to the twentieth year, increases gradually from this time to about the fortieth year, increases more rapidly for a few years, then remains stationary for a time, and finally diminishes again in old age.

Generally speaking, an increase of fat within moderate limits is a sign of health, just as a decrease may be the reverse, but when the increase is excessive it constitutes a true disease.

It is difficult to define the limit where a healthy embonpoint ends and abnormal corpulence begins. Life insurance companies have tables showing the proper ratio of weight to height at the different ages, but the figures are, of course, only averages.

In general it may be said that when the accumulation of fat causes discomfort, short breath on moderate exercise, and a feeling of fullness in the head on stooping, it constitutes obesity or corpulence.

The trouble is a disorder of nutrition characterized by faulty elaboration and deficient oxidation of the food, in consequence of which an undue amount of fat is formed and deposited in various parts of the body. It is as often hereditary as acquired.

The treatment of obesity is not so simple as it was thought to be when the so-called banting system was originated. This system consists in the exclusion from the diet of all starches, sweets and fats. It is usually successful in reducing the weight, but unless carried out under careful medical supervision it may seriously affect the general health.

The same is true, perhaps, even to a greater degree, of other systems in which the amount of fluids is greatly restricted.

The management of a case of obesity is in general similar to that of gout in the intervals of acute attacks, or of the uric acid diathesis, with some slight modification in the diet necessitated by the altered conditions. The patient should live much in the open air, drink freely of water between meals and bedtime, and exercise systematically. Red meats should be partaken of sparingly, or, better, not at all, and starchy foods and sweets should also be excluded for the most part.—Youth's Companion.

NAN—Kitty, what does the new book-keeper look like?

Kitty—Well, he looks like a man who always had to put on his necktie while running to catch a train.—Indianapolis Journal.

### The Smack in School.

A district school, not far away, Mid Berkshire hills, one winter's day, Was humming with its wonted noise Of three score mingled girls and boys; Some few upon their tasks intent, But more on furtive mischief bent, The while the master's downward look Was fastened on a copybook; When suddenly, behind his back, Rose sharp and clear a rousing smack! As 'twere a battery of bliss Let off in one tremendous kiss!

"What's that?" the startled master cries; "That, thir," a little imp replies, "Wath William Willith, if you pleathe—I saw him kith Thuthanna Peathe!" With frown to make a statue thrill, The master thundered, "Hither, Will!" Like wretch o'ertaken in his track, With stolen chattels on his back, Will hung his head in fear and shame, And to the awful presence came— A great, green, bashful simpton, The butt of all good-natured fun, With smile suppressed and birch upraised, The threatener faltered—"I'm amazed That you, my biggest pupil, should Be guilty of an act so rude! Before the whole set school to boot— What evil genius put you to't?" "Twas she herself, sir," sobbed the lad, "I did not mean to be so bad; But when Susannah shook her curls, And whispered, I was 'fraid of girls, And dursn't kiss a baby's doll, I couldn't stand it, sir, at all, But up and kissed her on the spot! I know—boo-hoo—I ought to not, But, somehow, from her looks—boo-hoo—I thought she kind o' wished me to!"

### Not Born For It.

The author of "Walks and Talks" gives a rat trainer's statement, in support of the saying, "Culture can increase the size, quality and flavor, but it cannot change the kind." After seeing different rats perform various feats the writer said to the trainer:

"I understand that you can't teach any rat to do anything you happen to want him to learn to do?"

"Oh, nein, nein!" the trainer replied. "You can't only teach a rat to do vot he vos made to do. Und ven a man is a goot rat deacher he knows dot ding, and he vont dry to teach a rat vot he can't learn. Und dot is yoost the tifference between a goot rat deacher and a shool deacher," he added. "A shool deacher, he dinks he can teach any shild anything vot he bleases. But he couldn't do it! Shildren is yoost like rats. Some vill learn von ding, und some vill learn anoder ding, und dot's a goot shool deacher dot knows dot ding, und vorks dot vay."

"Do you suppose I could ever learn to teach rats as you do?" said the writer.

The trainer eyed him a moment, and then said: "No, you couldn't do id. You vasn't der right kint of a man. Ven a man makes a goot rat deacher he vos got to been born yoost on purpose for dot beezness, und I don't believe you vos born dot vay."—Youth's Companion.

MAMA (reprovingly)—Gertie, did you tumble into bed without saying your prayers?

Gertie—Yes, mama. You see, I 'spected I'd be pretty tired to-night, so I said an encore after my prayers this morning.—Puck.

CAPTIOUS MOTHER—What do you want to marry that young man for? He doesn't know enough to set the world on fire.

Sensible daughter—May be not; but he says he knows enough to set the kindling wood in the kitchen range on fire.—Somerville Journal.

DAUGHTER—Yes, he proposed to me, and made me just shudder.

Mother—Why, he has a fair income and is quite respectable.

Daughter—Ah, but mamma, how could I intrust my whole fortune to a man so reckless and improvident as to want to marry?—Life.

SELDUM FEDD—Say, Soiled, how do you define 'faith'?

Soiled Spooner—Ah! Dat's what en-ables kind old ladies to t'ink dey are do-in' good when dey feed us.—Puck.

### Whence Came the Name America?

That America derives its name from Amerigo Vespucci has been regarded as a certainty. Now, however, a historian comes forward and assures us that this is not the case. This historian is Ricardo Palma, director of the National Library of Lima, Peru. He insists that America was not named after Amerigo Vespucci, but that, on the contrary, Amerigo Vespucci was named after America.

Senor Palma, who has studied this subject for several years, maintains that Vespucci's first name was Alberico. "The name 'America,'" he says, "is derived from a place in Nicaragua, being the name of a hill in the province of Chanvoles. Furthermore, the penultimate syllable 'ic' is very often found in the words used by the Indians of South America and the natives of the Antillies. The syllable itself signifies something large and lofty, and is found in the names of non-volcanic mountains."

He further points out that Columbus did not use the word "America" in his letters when he referred to the events of his first voyage. "It is more than probable," he continues, "that he learned through one of his attendants of the discovery of gold by some natives in a place called America. In this way it is likely that the name gradually became known throughout Europe. At that time the only geographical account of the western hemisphere was the one by Alberico Vespucci, which was published in Latin in 1505, and in German in 1508. Geographers presumably came to the conclusion that Alberico had given the name America not merely to a single hill or mountain, but to the entire country."

"When the first map of the continent bearing the title 'Province of America' was published in Barcelona, in 1522, Columbus and his companions were long dead, and there was no one to protest against the misuse of the name. Furthermore, there was no one in all Europe who bore the name Amerigo, and as Vespucci's name was Alberico, geographers and historians would surely have given the new continent the name if they had desired to honor him in this fashion."

"Newly discovered countries were only named after sovereigns, as we see in the case of Georgia, Louisiana, Maryland and the Philippines, and when explorers did give names to countries they selected those of their own families, as we see in the case of Vancouver and Magellan. The origin of such places as Columbia, Columbus and Colon can also be clearly traced."—Bassett's Scrap Book.

### Troublesome Pests.

Red ants are likely to leave if you welcome them with sulphur.

Put the sulphur in little bags and lay in the drawer or on the shelves which the red ants visit. Almost anything that has a pungent odor is likely to discourage ants. In fact, there are so many good ways of getting rid of them that they do not deserve to be entered into competition with roaches, whose superiority, to most of the methods that are used in fighting them, would be praiseworthy if it were not so very annoying. Cayenne pepper sprinkled into cracks where the ants congregate will dislodge them, says the New York Sun. Turpentine applied to the cupboard shelves will usually drive the ants out, although sometimes more than one application of the turpentine may be necessary. But turpentine is not pleasant to use about food, and, therefore, borax is often used instead when trying to rid the cupboard shelves of ants.

One cure for roaches is perfect cleanliness. Any scraps of food lying about will attract them; grease stains will supply them with food; a greasy sink is their delight, and carelessly kept food calls them from afar and near. Once fairly established in the kitchen, the battle is on, and it is by no means certain that the roach will be worsted and put to flight.

# ELGIN



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### Her Signature.

"Yes! I'm glad my name is May, It's short and sweet as you might say, So I think it's just as well It's not Cathlean or Issabell, For, if it had been, there's no telling What might have happened to the spelling." —St. Nicholas.

"Good Lord, in every time and place Give meat enough for saying grace; But if no meat Thou art bestowing, Give us bread enough to keep us going!" —Atlanta Constitution.

THE BOSS: "If we are to retain your services, Mr. Lambkin, you must take more care of your appearance. You look as if you hadn't shaved for a week." The Clerk: "But, sir, I am growing a beard." "That's no excuse. You must do that sort of thing out of business hours." —Glasgow Times.

### DOMESTIC ECONOMY.

#### Domestic Hints.

GRATED APPLE PIE.—Line a very deep pie plate with a rich paste. Peel three tart apples and grate them. Cream three ounces of butter with three of sugar, or use thick cream instead of butter. Mix with the apples and add the grated peel and one-half the juice of a lemon. Beat three eggs well, yolks and whites separately, and mix all together. Bake in a moderately hot oven without any upper crust. Serve with cream.

WHITE NUT CAKE.—Cream one-half a cup of butter, and work into it one and a quarter cups of sugar. When perfectly smooth, add two cups of flour sifted with two teaspoons of baking powder, one cup of walnuts or hickory nuts chopped in small pieces, three-quarters of a cup of sweet milk, and the whites of four eggs beaten stiff. Flavor with a teaspoon of vanilla. If chopped almonds should be used, flavor with a few drops of almond. Bake in small cakes, and when done frost and put a large nut on top of each. Or bake in a fluted pan with a cone in the center, in a moderately hot oven. It should bake in from twenty-five to thirty minutes.

SUET PUDDING.—One cupful of New Orleans molasses, one cupful of light brown sugar, three-fourths of a cup of raisins, seeded and cut up, one-half cup of currants; mix above ingredients and add one cupful of sour milk and one teaspoonful of soda, two pinches of cinnamon, one pinch of cloves, one-fourth of a teaspoonful of salt, one cupful of chopped suet, enough flour to make quite stiff; put into greased cake tin with a hole in the center; steam two hours; serve with hot brandy sauce. This pudding can be restewed a number of times, and will keep well. To make the sauce take three-fourths of a cup of butter, beaten with one and one-half cupfuls of sugar, two tablespoonfuls of flour; pour into three-fourths of a pint of boiling water; stir until smooth; add two tablespoonfuls of brandy. May be served hot, or is good eating when cold.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Sept. 18, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	71½@70¼	74½@73½
Thursday.....	70½@70¼	73½@74
Friday.....	70 @ 70¼	73½@73½
Saturday.....	* @ —	@ —
Monday.....	70¼@71½	73½@74½
Tuesday.....	70¼@72	74½@75½

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	35½@35	37½@37¼
Thursday.....	35 @ 35½	37½@37¼
Friday.....	35½@35½	37½@37¼
Saturday.....	* @ —	@ —
Monday.....	35½@36¼	37½@38½
Tuesday.....	36½@37½	38½@39½

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 00 @ 1 00½	@ —
Friday.....	1 00 @ 99½	1 03½@ —
Saturday.....	* @ —	@ —
Monday.....	1 00½@ 99½	1 04½@ 1 03½
Tuesday.....	1 00½@ 1 00½	1 04½@ 1 04½
Wednesday.....	1 00½@ 99½	1 03½@ —

\*Adjourned.

## WHEAT.

Very little of an encouraging character is presented for record in the immediate or prospective wheat market. Business the past week has been exceedingly slow. All the grain exchanges of this country and some of the leading ones of Europe were closed on Saturday last, out of respect to the memory of William McKinley, our late President. To-morrow (Thursday) the exchanges will be again closed on account of the funeral of the martyred President. Ships are taking on grain at Port Costa, but they are not meeting with as prompt dispatch as they should, considering the supply of tonnage here and the large quantities of wheat seeking an outlet. About four dozen ships are now in harbor, under charter for wheat. This fleet is sufficient to carry 150,000 tons, and should all be afloat inside of thirty days, but in all probability will not be all on the ocean in the time specified. The fleet inward bound, as registered at this date, has a carrying capacity of 300,000 tons. All of these vessels should put in an appearance inside of four months. The freight market has been showing a little more ease, owing to accumulations of engaged tonnage. The latest spot charter reported was at 36s. 3d. to Cork for orders, showing a decline of 2s. 6d., the equivalent of 2½c. per cental.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.00½@99½c.  
May, 1902, delivery, \$1.04½@1.03½.  
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.00½@99½c; May, 1902, \$1.03½.

California Milling.....	\$1 00 @ 1 05
Cal. No. 1 shipping, alongside.....	96¼@ 98¼
Oregon Valley.....	95 @ 1 00
Washington Blue Stem.....	97¼@ 1 02½
Washington Club.....	95 @ 97¼
Off qualities wheat.....	92½@ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	65½d@65½d	55½d@55½d
Freight rates.....	40@—s	36¼@38¼s
Local market.....	\$1 05@1 06¼	95@98¼

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

The market is without noteworthy change, quotable values continuing practically as last stated, but there is no special firmness. Spot stocks are not especially heavy, but at the same time there is more offering than there is immediate demand for at full current rates. Quotable values for wheat, however, show no improvement.

Superfine, lower grades.....	25 @ 24 40
Superfine, good to choice.....	2 50@2 75
Country grades, extras.....	3 00@3 25
Choice and extra choice.....	3 25@3 50
Fancy brands, jobbing.....	3 50@3 65
Oregon, Bakers' extra.....	2 75@3 15
Washington, Bakers' extra.....	2 75@3 25

## BARLEY.

There is no lack of shipping demand for desirable grades, and prevailing values for barley of this description are being well maintained. Not only is barley going

aboard ship, but some is being forwarded to Europe via Panama steamer and also via New Orleans, being wanted abroad by maltsters before the sailing vessels could reach destination. At corresponding date two years ago the season's shipments had aggregated 75,000 tons, and the record this year would probably have been as good, if strikes and insufficiency of cars had not retarded the movement. Feed descriptions are moving slowly on local account at generally unchanged rates.

Feed, No. 1 to choice.....	72½@ 75
Feed, fair to good.....	70 @ 72½
Brewing, No. 1 to choice.....	77½@ 83½
Chevalier, No. 1 to choice.....	1 00 @ 1 05
Chevalier, poor to fair.....	75 @ 90

## OATS.

While buyers are not disposed in most instances to take hold freely at full current figures, it is the exception when they are able to operate at material concessions, especially when best grades are desired. Little or no undue selling pressure is being exerted. The Government is buying considerable oats at Northern points and in this center.

White Oats, fancy feed.....	1 20 @ 1 25
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 15
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 22½@ 1 30
Black Russian.....	25 @ 1 15
Red.....	95 @ 1 25

## CORN.

Stocks of all descriptions are of very small volume, making it difficult for the time being to quote values. As can be readily inferred, business is mostly of a retail character.

Large White, good to choice.....	1 70 @ 1 75
Large Yellow.....	1 65 @ 1 70
Small Yellow.....	1 75 @ —
Eastern, in bulk (carload lots).....	1 60 @ 1 65

## RYE.

There are no evidences of much doing in this cereal. Prices remain at a low range.

Good to choice, new.....	77½@ 80
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## BUCKWHEAT.

The views of local millers are not exalted as to values, but they are securing very little buckwheat at present at the prices named.

Good to choice.....	1 40 @ 1 50
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## BEANS.

New beans are coming forward, but not in very heavy quantity, and indications are that there will be no special glut of offerings in the near future. Arrivals of new crop thus far have been mainly Lady Washingtons or Large Whites, although some Blackeyes and a few Bayos and Pinks have been received. It will be several weeks, however, before colored beans will likely arrive in anything like wholesale quantity, the colored as a rule being a little later in maturing than white beans. There is a very fair inquiry for new crop, both on local account and for shipment.

Pea, fair to good, 100 lbs.....	4 75 @ 5 00
Small White, good to choice.....	4 90 @ 5 00
Lady Washington.....	2 75 @ 3 00
Pinks.....	2 25 @ 2 50
Bayos, good to choice.....	2 75 @ 3 00
Reds.....	3 00 @ 3 25
Red Kidney.....	4 00 @ 4 25
Limas, good to choice.....	6 40 @ 6 50
Black-eye Beans.....	3 00 @ 3 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

The market is quiet, with offerings and demand both light. In quotable rates there are no changes to note, but only for choice Green can the market be termed firm. Custom for Niles peas is not readily secured at extreme current rates.

Green Peas, California.....	2 25 @ 2 50
Niles Peas.....	1 50 @ 1 75

## WOOL.

The local market shows much the same general condition as for a fortnight or more preceding. There is little desirable wool now offering in this center. There is no lack of demand for fine wools, especially for free stock, and market for same is firm at the quotations. Fall wool is not arriving freely, and much of that coming forward represents purchases made in the interior in the interest of shippers and dealers in this center.

## SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Humboldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 11
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6½@ 8½
San Joaquin Lambs.....	7½@ 9

## HOPS.

Shipments of new crop hops are being

made to England and the East, but mostly if not wholly on consignment, or else in the way of deliveries on contracts. Growers are in most instances contending for higher figures than wholesale operators will pay at this date. While 15c is being asked for choice, it is doubtful if 13c could be realized, unless in a small way for hops of superior quality.

Good to choice 1901 crop.....	11 @ 13
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## HAY AND STRAW.

Less trouble is being experienced locally in making deliveries of hay than during greater part of past month, but there is difficulty in securing cars to bring all the hay forward which is awaiting shipment. That there will be any great relief immediately on the latter score is doubtful. Values continue quotably unchanged, with market moderately firm for choice to select, but weak for the lower grades.

Wheat, good to choice.....	7 50@10 50
Wheat and Oat.....	7 00@ 9 50
Oat.....	6 50@ 9 00
Alfalfa.....	8 50@10 50
Clover.....	5 50@ 7 00
Stock.....	5 00@ 7 00
Compressed.....	8 00@10 00
Straw, ½ bale.....	25 @ 40

## MILLSTUFFS.

There are no accumulations of consequence of mill offal of any description and prices remain at a high range. In market for Rolled Barley and Milled Corn there are no radical changes, but last named product is held with decided firmness.

Bran, ½ ton.....	20 50@21 50
Middlings.....	21 50@23 00
Shorts, Oregon.....	21 00@22 00
Barley, Rolled.....	17 00@17 50
Cornmeal.....	34 00@—
Cracked Corn.....	35 00@—

## SEEDS.

For the several kinds quoted herewith the market is exceedingly quiet. Spot stocks and offerings are of too light volume to admit at the moment of any extensive trading. Values remain quotably in same position as previously noted.

	Per ctt.	Per lb.
Flax.....	2 50@3 00	
Canary.....	3¼@ 3¼	
Rape.....	1¼@ 2¼	
Hemp.....	3¼@ 3¼	

## BAGS AND BAGGING.

Not much doing in this department. A few Wool Bags and Fruit Sacks are moving into the interior, with values for both ruling steady. Grain Bags are now receiving practically no attention.

Calcutta Grain Bags, spot.....	7¼@ 7¼
San Francisco Grain Bags, 22x36, spot.....	7 @ 7¼
Wool Sacks, 4 lbs.....	31 @ 36
Wool Sacks, 3½ lbs.....	33 @ 31
Fleece Twine.....	8¼@ —
Gunnies.....	@ —
Bean Bags.....	5¼@ 5¼
Fruit Sacks, cotton, three sizes.....	5¼, 6, 6¼
Fruit Sacks, Jute.....	7 @ 7¼

## HIDES, PELTS AND TALLOW.

The Hide market is as a whole showing steadiness, but prices are being a little better sustained on Wet Salted than on Dry Hides, the market being relatively firmer locally than it is East. Pelts are in fair request at quotably unchanged values. Tallow is meeting with custom at current rates about as rapidly as received.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10¼@—	9 @—
Medium Steers, 48 to 56 lbs.....	9¼@—	8 @—
Light Steers, under 48 lbs.....	8¼@ 9	8 @—
Heavy Cow Hides, over 50 lbs.....	9 @—	8 @—
Light Cow Hides, under 50 lbs.....	8¼@ 9	8 @—
Wet Salted Kip.....	9 @—	8 @—
Wet Salted Veal.....	9 @—	8 @—
Wet Salted Calf.....	10 @—	9 @—
Dry Hides.....	16 @—	14 @—
Dry Kip and Veal, 11 to 16 lbs.....	16 @—	13 @—
Dry Calf, under 4 lbs.....	17 @—	15 @—
Salted Horse Hides, large.....	2 50	@—
Salted Horse Hides, medium.....	2 00	@—
Salted Horse Hides, small.....	1 00	@—
Dry Horse Hides, large.....	1 75	@—
Dry Horse Hides, small.....	1 00	@ 1 25
Dry Colts' Hides.....	50	@—
Pelts, long wool, ½ skin.....	75	@ 1 00
Pelts, medium, ½ skin.....	50	@ 75
Pelts, short wool, ½ skin.....	30	@ 40
Pelts, shearling, ½ skin.....	10	@ 25
Deer Skins, best summer.....	35	@—
Deer Skins, good medium.....	—	@ 30
Deer Skins, thin winter.....	—	@ 10
Elk Hides.....	10	@ 12
Tallow, good quality.....	4¼	@ 4¼
Tallow, No. 2.....	3¼	@ 4
Goat Skins, perfect.....	30	@ 37½
Goat Skins, damaged.....	10	@ 20
Kid Skins.....	5	@ 10

## HONEY.

Buyers are not taking hold very freely, being unable to operate at prices to their suiting. Growers are not inclined to crowd stock to sale, and in some instances for superior qualities are realizing slightly above quotable rates.

Extracted, White Liquid.....	5¼@—
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Extracted, Light Amber.....	4¼@—
Extracted, Amber.....	4 @—
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7

## BEESWAX.

Previous prices continue in force. Market is not so burdened with offerings, nor is it likely to be overstocked very soon.

Good to choice, light, ½ lb.....	25 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Market for Beef has shown no noteworthy changes since last review. Supplies are equal to the immediate demand. Values for Mutton are being fairly well maintained, with no likelihood of declining materially in the near future. Lamb now offering is mostly too old and heavy to command any very pronounced premium in price over Mutton. Veal is in light supply and when desirable as to size sells to advantage. Hogs are showing slightly increased receipt, mainly from stubble fields, but prices are being fairly well maintained, demand being more active.

Beef, first quality, dressed, net ½ lb.....	6 @ 6¼
Beef, second quality.....	6 @—
Beef, third quality.....	5¼@—
Mutton—ewes, 6@7c; wethers.....	7 @ 7¼
Hogs, hard grain fed, medium.....	6 @ 6¼
Hogs, small, fat.....	6 @ 6¼
Hogs, large, hard.....	5½@ 5¾
Hogs, country dressed.....	7¼@ 7½
Veal, small, ½ lb.....	8 @ 10
Veal, large, ½ lb.....	8 @ 8¼
Lamb, spring, ½ lb.....	7¼@ 8

## POULTRY.

Continued cutting competition among shippers of Eastern poultry, several large operators endeavoring to have a monopoly of this market, as far as Eastern product is concerned, causes generally low prices to prevail and operates against the producers in this State. It is quite common to have Eastern poultry sold here at a loss, owing to the struggle of handlers for supremacy. Fine Broilers and fat Young Turkeys were the only kinds which were salable this week to advantage, and demand for these kinds at full figures was not heavy.

Old Turkeys, live hens, ½ lb.....	12 @ 13
Old Turkeys, live gobblers, ½ lb.....	9 @ 10
Young Turkeys, full grown.....	17 @ 20
Hens, California, ½ dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 00 @ 4 50
Fryers.....	3 00 @ 3 50
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 50 @ 3 00
Ducks, old, ½ dozen.....	3 00 @ 3 50
Ducks, young, ½ dozen.....	3 50 @ 4 50
Geese, ½ pair.....	1 50 @ 1 75
Goslings, ½ pair.....	1 50 @ 1 75
Pigeons, old, ½ dozen.....	1 25 @ 1 50
Pigeons, young.....	1 75 @—

## BUTTER.

There is no improvement to record in quotable rates or the general condition of the butter market. Demand for fresh is mainly limited to most select or else to lowest priced stock for bakers, the medium grades being greatly neglected on account of the run on cold storage butter, stocks of the latter being liberal.

Creamery, extras, ½ lb.....	25 @—
Creamery, firsts.....	21 @ 22
Creamery, seconds.....	20 @ 21
Dairy, select.....	22 @—
Dairy, firsts.....	19 @ 20
Dairy, seconds.....	18 @—
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll, ½ lb.....	19 @ 20
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17¼

## CHEESE.

There are no large supplies of domestic product in this center, and no evidence of heavy quantities being held in the interior. Market is fairly firm, with sales of choice flats up to 12c., but only in a small way, this figure being wholly unwarranted as a wholesale quotation. Eastern cheese is in moderate supply and is going at 12@15c., as to quantity and quality.

California, fancy flat, new.....	11 @—
California, good to choice.....	10 @ 10¼
California, fair to good.....	9¼@ 10
California Cheddar.....	@—
California, "Young Americas".....	11¼@ 12

## EGGS.

Strictly fancy fresh eggs are a rather scarce article, and in a small way are bringing tolerably stiff figures, but there is a disposition on the part of holders of cold storage eggs to quote fancy fresh higher than warranted, so as to help the sale of ice-house eggs. Stocks of latter continue heavy. Some Eastern fresh have been sold at less than cost.

California, select, large, white and fresh.....	33¼@—
California, select, irregular color & size.....	28 @ 30
California, good to choice store.....	23 @ 25
Eastern, good to choice.....	19 @ 21
Cold Storage.....	19 @ 21

## VEGETABLES.

The Onion market has ruled rather quiet since last review, with no radical changes in quotable rates in the meantime, but a rather easy tone. There were



tolerably heavy shipments made to Australia per last steamer, representing previous purchases. Tomatoes continued in free receipt and market favored buyers. Much of the Green Corn now arriving is too old to be desirable, and prices for such stock rule low. Most vegetables in season were in ample supply for all immediate needs.

Asparagus, $\frac{1}{2}$ box.....	— @ —
Beans, String, $\frac{1}{2}$ lb.....	1½ @ 2½
Beans, Lima, $\frac{1}{2}$ lb.....	3 @ 4
Beans, Wax, $\frac{1}{2}$ lb.....	— @ —
Cabbage, choice garden, $\frac{1}{2}$ 100 lbs...	40 @ 50
Cauliflower, $\frac{1}{2}$ dozen.....	40 @ 50
Corn, Green, $\frac{1}{2}$ sack.....	40 @ 75
Corn, Green, Alameda, $\frac{1}{2}$ large crate.	75 @ 1 25
Cucumbers, Bay, $\frac{1}{2}$ large box.....	25 @ 40
Egg Plant, $\frac{1}{2}$ box.....	35 @ 50
Garlic, $\frac{1}{2}$ lb.....	2 @ 3
Okra, Green, $\frac{1}{2}$ box.....	40 @ 60
Onions, Yellow Danver, $\frac{1}{2}$ cental....	90 @ 1 10
Peas, Sweet garden, $\frac{1}{2}$ lb.....	2 @ 2½
Peas, good to choice, $\frac{1}{2}$ sack.....	— @ —
Peppers, Green Chile, $\frac{1}{2}$ sack.....	30 @ 50
Peppers, Bell, $\frac{1}{2}$ box.....	40 @ 60
Squash Summer, $\frac{1}{2}$ small box.....	25 @ 40
Summer Squash, Bay, $\frac{1}{2}$ large box...	50 @ 75
Tomatoes, $\frac{1}{2}$ large box.....	25 @ 60
Tomatoes, $\frac{1}{2}$ small box.....	15 @ 30

#### POTATOES.

While there was some shipping demand for potatoes, the inquiry was light as compared with a few weeks ago, as Oregon and Colorado are now shipping. Prices have not changed here materially since last review, but the market was not noteworthy for firmness. Some who are closely connected with the trade believe the market will strengthen again later on, owing to the shortage East. Sweets sold at a tolerably wide range, owing to great difference in quality.

Burbanks, Salinas, $\frac{1}{2}$ 100 lbs.....	1 30 @ 1 60
San Leandro, in sacks, $\frac{1}{2}$ cental....	1 25 @ 1 50
River Burbanks in sacks, $\frac{1}{2}$ cental....	75 @ 1 20
Mission Garnet Chile, in sacks.....	1 00 @ 1 30
Sweets, new, $\frac{1}{2}$ cental.....	50 @ 1 00

#### The Fruit Market.

##### FRESH FRUITS.

Apples are not in heavy stock, and for best qualities the market is showing firmness, although not quotably higher. Gravenstein continue in favor, but this variety will before long be out of season, receipts being now light. Bellefleurs are beginning to come forward, but there are few of present offerings sufficiently colored to be desirable. Bellefleurs are selling within range of 50@85c per box, with few green commanding over 65c in a wholesale way. Bartlett Pears are in light receipt, the season for same being nearly ended. For choice to select Bartlett's the market is quite firm. Other pears are going at generally unchanged rates. Peaches were in tolerably liberal supply, especially in carriers, market for latter package being weak at 40@65c for freestone. Some Mountain peaches of superior quality sold above quotable rates. Plums went at much the same figures as quoted preceding week, with only moderate quantities offering, especially of large and desirable fruit. Table Grapes were in fair supply, especially other than choice seedless, and for the ordinary run of offerings the market favored buyers. Seedless were in too slim supply to quote. Wine Grapes were in increased receipt and sold at a wider range, with firmness of the market confined mainly to best Zinfandel. Strawberries arrived sparingly, especially choice Longworths, these bringing good prices. Huckleberries were in good supply and market easy. Melons were held about as last quoted, but demand was less active than preceding week, weather not being so warm.

Apples, fancy, $\frac{1}{2}$ 4-tier box.....	1 25 @ 1 50
Apples, good to choice, $\frac{1}{2}$ 50-lb. box..	50 @ 1 00
Apples, common to fair, $\frac{1}{2}$ 50-lb. box.	35 @ 50
Apples, green, $\frac{1}{2}$ 50-lb. box.....	35 @ 60
Blackberries, $\frac{1}{2}$ chest.....	3 50 @ 5 00
Cantaloupes, $\frac{1}{2}$ crate.....	65 @ 1 25
Figs, 2-layer box.....	40 @ 75
Grapes, Isabella, $\frac{1}{2}$ crate.....	50 @ 85
Grapes, Black, $\frac{1}{2}$ crate.....	50 @ 75
Grapes, Muscat, $\frac{1}{2}$ crate.....	50 @ 75
Grapes, Tokay, $\frac{1}{2}$ crate.....	50 @ 65
Grapes, Zinfandel, $\frac{1}{2}$ ton.....	25 00 @ 28 00
Grapes, White, $\frac{1}{2}$ ton.....	17 00 @ 20 00
Logan Berries, $\frac{1}{2}$ chest.....	— @ —
Nutmeg Melons, $\frac{1}{2}$ crate.....	40 @ 75
Peaches, $\frac{1}{2}$ box.....	30 @ 65
Pears, Bartlett's, $\frac{1}{2}$ 40-lb. box.....	75 @ 1 50
Pears, other kinds, $\frac{1}{2}$ box.....	40 @ 75
Plums, $\frac{1}{2}$ crate.....	40 @ 75
Pomegranates, $\frac{1}{2}$ box.....	65 @ 1 00
Prunes, $\frac{1}{2}$ crate.....	40 @ 75
Quinces, $\frac{1}{2}$ box.....	35 @ 60
Raspberries, $\frac{1}{2}$ chest.....	6 00 @ 7 00
Strawberries, Longworth, $\frac{1}{2}$ chest..	6 00 @ 7 00
Strawberries, Large, $\frac{1}{2}$ chest.....	4 00 @ 5 00
Watermelons, $\frac{1}{2}$ 100.....	5 00 @ 20 00
Whortleberries, $\frac{1}{2}$ lb.....	7 @ 9

##### DRIED FRUITS.

In all essential respects the market for cured and evaporated fruits is in much the same condition as noted in preceding report. About the only appreciable change to record is an easier feeling for

Apples, in sympathy with lower markets East for this fruit. As the strength of the Apple market here was wholly the result of shortages East and stiff prices established there, it is but natural that an easier feeling should be experienced here in response to corresponding conditions on the Atlantic side. That the weakness in the Apple market will be very pronounced or of long duration is not considered probable. Prices had been crowded to tolerably high levels, and that there should be a slight relapse is not surprising, particularly at this time, when the bulk of this year's product is likely to be soon landed on the market. The quotable decline on evaporated Apples does not exceed half a cent per pound, and applies more to extreme prices than to inside figures. Apricots are not being eagerly sought after at extreme current rates, especially if not strictly choice to fancy, but there are no evidences of buyers being able to obtain material concessions, even on fair to medium qualities. Peaches are rather quiet, and under selling pressure would be lower, but there is no noteworthy crowding of offerings to sale. Figs are in fair request at unchanged rates. Plums are not offering in very heavy quantity, and for good to choice pitted, buyers find it necessary to pay about the same figures current for a fortnight or more past. Prunes remain quotable on the 3@3½ basis for the four sizes, these figures being asked for old and are bid for new crop, with little doing, most buyers not caring to stock up with old, and handlers being slow to short the market on new to any material extent on above basis of values.

##### EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7½ @ 8
Apricots, Royal, choice, in sacks, $\frac{1}{2}$ lb..	9 @ 10
Apricots, Moorpark.....	10 @ 13
Apples, in 50-lb boxes, rings, pressed, fancy.....	8 @ —
Apples, 50-lb boxes, rings, pressed, good to choice.....	7 @ 7½
Figs, pressed.....	5 @ 7½
Nectarines, $\frac{1}{2}$ lb.....	5½ @ 7
Peaches, unpeeled, fancy.....	7 @ 7½
Peaches, unpeeled, choice.....	6 @ 6½
Peaches, peeled, in boxes.....	12 @ 14
Pears, halves, choice to fancy.....	8 @ 9
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	5½ @ 6½
Prunes, Silver.....	— @ —
Prunes, 4 sizes, in bags, 3@3½c; 50-60s, 4½@4½c; 60-70s, 3½@4c; 70-80s, 3¼@3½c; 80-90s, 2¾@3c; 110s and less, 2@—c.	

##### COMMON SUN-DRIED.

Apricots.....	6 @ 7
Apples, sliced.....	4 @ 5
Apples, quartered.....	4 @ 5
Figs, Black.....	3 @ 3½
Figs, White.....	3½ @ 4
Peaches, unpeeled.....	5½ @ 6½
Pears, prime halves.....	5½ @ 6½
Plums, unpitted, $\frac{1}{2}$ lb.....	1¼ @ 2¼

##### RAISINS.

The market remains practically as last noted, being virtually bare of old stock and too early for new. Some purchases are being effected in the sweat boxes at last quoted rates—3½c for Muscatels and 5c for Sultanas. Thompson Seedless promise to rule high, owing to very light yield.

##### CITRUS FRUITS.

Late Valencia Oranges are in very fair supply for this date, with demand rather slow, asking figures remaining practically as last noted. The Lemon market is quiet at quotably unchanged values. Cooler weather and cheap Limes have operated against the advantageous sale of Lemons. Stocks of Limes were further replenished by free arrivals from Mexico, prices remaining low.

Oranges—Valencia, $\frac{1}{2}$ box.....	1 50 @ 2 50
Lemons—California, select, $\frac{1}{2}$ box.....	2 75 @ 3 00
California, good to choice.....	2 00 @ 2 50
California, common to fair.....	75 @ 1 75
Limes—Mexican, $\frac{1}{2}$ box.....	3 00 @ 3 50

##### NUTS.

A fair demand for new crop Almonds is noted, buyers naming 11c for prime I X L's and 11½@12c for Nonpareils. Minor sales of last year's Walnuts are reported within range of 11@12c, with stocks of same very light. Peanuts are meeting with fair custom at generally unchanged values, with no heavy quantity offering.

California Almonds, shelled.....	18 @ 22
California Almonds, paper shell, $\frac{1}{2}$ lb.....	12 @ 14
California Almonds, soft shell.....	10 @ 12
California Almonds, hard shell.....	6 @ 7
Peanuts, California, fair to prime.....	4½ @ 5½
Peanuts, Eastern, hand-picked.....	5½ @ 6
Pine Nuts.....	5 @ 6

##### WINE.

In the wholesale market there is virtually nothing doing in wines, owing to the absence of noteworthy offerings. Values for dry wines of last season's vintage, based on latest reported transactions, are nominally 22@25c. per gallon. Wine grapes are in good request, and crushing of same is now in process in most sections of the State. Prices for dry wine grapes range from \$18 to \$25 per ton in the interior, as to quality, quantity, variety and

section. Sales of choice Zinfandel have been effected in this city up to \$30 per ton for small lots, the grapes going to consumers making their own wine, but this figure is an extreme not obtainable in a regular or wholesale way.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{2}$ sacks.....	105,561	1,249,264
Wheat, centals.....	123,109	696,987
Barley, centals.....	324,641	1,169,003
Oats, centals.....	32,025	254,464
Corn, centals.....	905	14,105
Rye, centals.....	360	8,355
Beans, sacks.....	9,518	30,787
Potatoes, sacks.....	29,607	300,006
Onions, sacks.....	7,695	71,825
Hay, tons.....	3,386	30,563
Wool, bales.....	1,580	17,732
Hops, bales.....	187	392

#### EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{2}$ sacks.....	55,976	985,876
Wheat, centals.....	116,322	578,613
Barley, centals.....	175,199	789,173
Oats, centals.....	175	1,340
Corn, centals.....	766	7,892
Beans, sacks.....	143	1,769
Hay, bales.....	100	741
Wool, pounds.....	126,521	341,316
Hops, pounds.....	36,556	58,140
Honey, cases.....	—	1,420
Potatoes, pack's... ..	679	8,161

#### California Dried Fruit at New York.

NEW YORK, Sept. 18.—Evaporated apples, common, 5@8c; prime wire tray, 8½@8¾c; choice, 9c; fancy, 9½@9¾c. California Dried Fruits.—A moderate demand and values as a rule are being well maintained. Prunes, 3½@7c. Apricots, Royal, 8½@13c; Moorpark, 9½@14c. Peaches, unpeeled, 7@9½c; peeled, 11@15c.

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## CEREAL CROPS.

### A Representative and Determined Assembly of Wheat Growers.

Grain growers, representing many of the most productive counties in California, thoroughly aroused over the existing conditions which imperil their crops and leave them in prospect nothing but complete and early ruin, gathered in Sacramento, Sept. 12th. The disastrous consequences of the labor strike, which prevents the transportation of the product of the farms in almost every section, furnished the theme for consideration.

The counties represented were: Monterey, San Luis Obispo, Sutter, Yolo, Placer, Merced, Solano, Colusa, Madera, Yuba, Tulare and Glenn. The wheat growers present numbered nearly 200 and were a representative body. They are very much in earnest and declare that a crisis is at hand and they must take vigorous measures or lose their entire year's product. They say they have waited over six weeks for some action on the part of the authorities and are forced to act for themselves.

The convention was called to order at the appointed hour by Will S. Green, chairman of the Sacramento Valley Development Association. He explained the situation that confronts the grain growers, and then G. W. Pierce of Knights Landing was elected chairman. "This is an age, apparently, of combinations," said Chairman Pierce. "We are confronted on every side with combinations. Whether it is cutting one's hair or blacking one's boots, it matters not—the union label has got to be somewhere. Why should not the farmer demand the same thing. The farmer has been the butt of the laboring man at all times. We produce the goods; the laborer does not want to handle them and then the farmer reaches a point that he cannot continue. We must act and act promptly."

UNITED ACTION.—After a general discussion of the

situation at Port Costa, the following resolutions offered by Jesse Poundstone of Colusa were adopted:

WHEREAS, It has come forcibly to our knowledge that there exists at Port Costa, where the bulk of the grain of California must be handled, a condition of lawlessness which prevents grain from being unloaded from barges and cars or loaded on ships, thus congesting the crop in the interior, where a very large percentage must be destroyed if not speedily moved; and,

Whereas, The farmers have ever been on the side of the workmen of the country in the struggle for a more equal distribution of wealth; and,

Whereas, The destruction of a crop is a serious thing, not only to the State, and vitally so to the laboring man; therefore, be it

Resolved, That a committee be appointed to consult with the men now interfering with the movement of the crop by intimidating men who are willing to work, and see if they will not cease opposition and go to work. Next, to ask the sheriff of Contra Costa county if he can maintain the law, protect workmen while loading and unloading grain, and, third, to ask the Governor to use the power of the State to that end.

Resolved, That failing in this, it will be the duty of the farmers to go to Port Costa in such numbers and with such accoutrements as will compel order and allow the work to go peacefully along.

Resolved, That the committee thus appointed shall have power to act in all things and may call for volunteers if such steps shall be forced upon us.

A committee was appointed to carry out these resolutions, consisting of Joseph Craig of Woodland, chairman; William Beckman of Sacramento and J. H. Rice of Dixon. George W. Pierce of Yolo, chairman of the convention, is an ex-officio member.

PERMANENT ORGANIZATION.—Will S. Green of Colusa called attention to the conditions affecting the wheat grower. He spoke of the commercial field opened in the Orient and said that the fruits of Dewey's victory were being dissipated by reason of an alleged grievance on the part of union labor of which no one could give an intelligible idea. As to its ultimate detrimental effect on the State he declared there was no question. "While every interest in the United States is organizing for self-protection," said Mr. Green, "the farmer stands idly by, grows his crop and markets it as best he can. You may call this movement a 'trust' if you like, but the average grain grower is dependent upon some one else for

what little he can get for his crop. The time for action is ripe and the only means to get at it is organization."

Mr. Myers of Alameda county explained at length a co-operative plan by which he thought great benefit might be brought to the grain raisers. He explained the matter in detail and offered his experience to bring the matter into tangible shape. The plan of co-operation met with great favor and a committee, consisting of F. W. Yokum, H. M. Larue, P. R. Garnett, L. D. Stephens and W. S. Green, was appointed to arrange the details.

Another important step in the organization of the grain growers was effected by a resolution proposed by Mr. Craig of Yolo county, calling for a meeting of all grain growers in their respective counties to form a State convention wherein the industry would be represented by a delegate representing each ten farmers in the various grain-growing counties. The plan is to have as many as possible meet on Saturday, Sept. 21st, and elect delegates to a convention to be held at Sacramento on Wednesday, Sept. 25th. This convention is to be known as the State Farmers' Convention and the committee appointed is to prepare a scheme of organization to be submitted to the main body. This proposition was heartily endorsed.

IMMEDIATE ACTION.—When the meeting adjourned the several committees met and laid out their plans of action. The meetings merely dealt with details, but no definite result was reached. Each member of the committees declared himself in favor of immediate action. The committee to look into the labor question will probably visit Port Costa and other grain-shipping centers to acquaint themselves with the conditions. It is likely that this affair will move rapidly. After the meeting Sheriff Veale of Contra Costa county and Edgar F. Depue of the Port Costa warehouses were in consultation with Governor Gage over the strike situation at Port Costa. Nothing was given out as the result of the conference other than the statement by Depue that the Governor was anxious to do anything he properly could to improve the situation.

Veale and Depue were also in consultation with William Beckman of the wheat growers' committee, and it was agreed to meet the committee at Port Costa as soon as they can get together.



A standard road No. 2 Locomobile on the San Jose Race Track which ran 1 mile in 1:34.

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Send for Catalogue. ✱ 1622 MARKET ST., SAN FRANCISCO, CAL.

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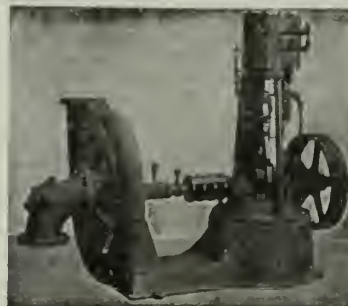
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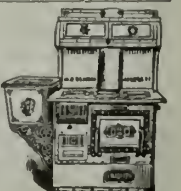
## PATENTS.

Attend to all business connected with U. S. and Foreign Patents, Caveats, Designs, Trade-Marks, Copyrights and Labels; prepare Assignments, Licenses and Agreements, and furnish opinions as to Patentability, Infringement, etc. DEWEY, STRONG & CO. (Established 1860), 330 Market St., S. F., Cal., and 918 F St., Washington, D. C.

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WILLARD STEEL RANGE into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lds. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/4 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Dept. 8. Will ship C. O. D. with privilege of examination.





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### FRUIT MARKETING.

#### Cabled Markets for Fruits.

Special Cables to the Pacific Commercial Museum  
of San Francisco.

**PRUNES.**—From U. S. Consul at Bordeaux, France, Sept. 10: The size of the prune crop is 20% less than last reported. Prunes run above average in size and quality. Opening prices, delivered on the quay at Bordeaux, are as follows:

American Grading.	Per pound.
33s to 35s.....	16c.
36s to 38s.....	14½c.
40s to 45s.....	13½c.
45s to 50s.....	11½c.
55s to 60s.....	9½c.
65s to 70s.....	8½c.
90s to 95s.....	7c.
100s to 110s.....	5½c.

On August 3, last report, the Consul cabled that the prune crop was estimated 25% less than that of last year.

The U. S. Vice-Consul at Belgrade, Servia, Sept. 6: Prunes, 80s to 85s, 6 cents; 95s to 100s, 5 cents; prospects unchanged.

Although indefinite, this probably means that the equivalent of 75s to 80s, American grading, are offered at 5 cents per pound, and of 90s to 95s, American grading, at 4½ cents per pound, f. o. b. at Schaatz, Servia, exclusive of any commission.

**RAISINS.**—Copy of cable from U. S. Consul, Malaga, Spain, Sept. 6: Opening prices new Malaga, London layers, per box, \$1.20 c. i. f.; new Malaga, clusters, per box, from \$1.70 for Connoisseurs (cheapest grade), \$2.25, \$2.67 to \$3.24 for Imperial Clusters (highest grade), c. i. f.; new Malagas, loose Muscatels, per box, from \$1.95 for 5-crown (highest grade), \$1.50, \$1.25 to \$1.03 for 2-crown (cheapest grade), c. i. f. Size of raisins run above average. Condition and size of crop about as last reported.

Special consular report received Sept. 10: Sale of raisin crop (1901) commenced on Aug. 10; opening prices per cwt of 112 pounds, c. f. New York, as follows:

New Sultanas, 2-crown.....	\$8 82
" " 3-crown.....	8 10
" " 4-crown.....	7 60

Crop conditions remain the same as in the June report. Crops run to large sizes. Movement of crop slow.

In a report of June 15, 1901, the Consul reported a good average crop was expected, estimated as follows: Sultanas, 33,000 tons; red raisins, 8800 tons; black raisins, 18,800 tons.

**WALNUTS.**—Cable from U. S. Consul Thackara, dated Havre, France, Sept. 7: Opening prices new walnuts: Grenoble, pure Mayettes, 13½ cents per kilo (6½ cents per pound), f. o. b. Havre; Marbots, first choice 10½ cents per kilo (4½ cents per pound), f. o. b.; Cornes, 8½ cents per kilo (.0398 cents per pound), f. o. b. Bordeaux.

Elgin Watches sold by jewelers everywhere in various sizes and styles. Prices to suit. Send for free booklet. Elgin National Watch Co., Elgin, Ill.

"We make the most fencing because we make the best. The kind you want. Write American Steel & Wire Co., San Francisco, Cal."

## THE IRRIGATOR.

What a Gasoline Pump Has Done.

E. C. Forbes of National City, San Diego county, gives the San Diego Union a most complete and detailed account of cost of pumping with a gasoline engine. Mr. Forbes, says G. P. Hall in prefacing the statement, is methodically concise and prudent in the management of his affairs and a thoroughly competent engineer, making his statement the acme of reliability. His pumping plant consists of a 3½ H. P. gasoline engine, two cylinder pumps, 5 inches in diameter, 15-inch stroke, twenty-nine strokes to the minute, but one cylinder was not used all the time; well 63 feet deep, 4½ feet in diameter; tank holds 2500 gallons, bottom of tank 23 feet from top of well. The longest distance the water is delivered is 1000 feet, 400 feet being through 4-inch red-wood pipe, the balance 2-inch pipe, the pumps throwing 4000 gallons per hour. The total run from Aug. 18, 1900, to Jan. 31, 1901, in 500 hours and 15 minutes, pumping water for irrigation, was 1,658,357 gallons; for the tank, 69,765 gallons; total water pumped, 1,728,122 gallons; number of gallons of water pumped to one gallon of oil, 8348; oil used per running hour, .4; total cost of oil at 17 cents per gallon, \$35.19; cost of oil for 1000 gallons of water pumped, .02.

Interest on cost of plant, \$1200, at 5%.....	\$ 60 00
Labor cleaning engine, etc.....	45 00
Repairs, including 5% wear.....	60 00
Lubricating oil.....	25 00
Gasoline for 3000 hours' run.....	204 00
Add 15% profit and loss.....	59 10
<b>Total.....</b>	<b>\$453 10</b>
300 hours' pumping cost.....	4 53
1 hours' pumping cost.....	15
4000 gallons pumping cost.....	15
1000 gallons pumping cost.....	04

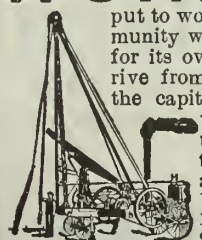
If my name isn't  
on your lamp chim-  
neys you have  
trouble with them.

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If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.

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put to work in almost any community will make more money for its owner than he can derive from three or four times the capital invested in anything else. It thus takes but little capital to get into an honorable and profitable business. They are ideal machines for water, oil, gas and salt wells, and are unequalled for making "bore holes" for testing mineral lands. Drill all sizes and depths. We carry full line of drill supplies, tools, cables, etc.

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are the Standard; they are guaranteed to pump more water with the same power than any other pump, any quantity, any height.

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If cost more, are worth double, for they produce enough more butter than the best competing separator to pay fully 6 per cent interest on whole first cost of machine.

We Absolutely Warrant It and Give Free Trial to Prove It.

Also very light running, a 600 lb. machine turning easier than other 300 lb. machines. No disks to hother with and get out of order. No complications.

If you want to know about all different separators, send us for a copy of "The Separator," containing an expert opinion on them, together with free Catalog No. 131. Sharples Co., Chicago, Ill. P. M. Sharples, West Chester, Pa.

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DO YOU WANT  
More Cream and Less Work?  
Then Buy an  
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Separator  
That is the kind that  
GETS ALL  
THE CREAM  
It also saves much time and labor and makes dairying more pleasant and profitable.  
Illustrated catalogues are to be had for the asking.  
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—FROM THE—  
EAST to CALIFORNIA.

FEWEST MILES  
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FEWEST HOURS

Perfectly Conducted Tourists' Excursions  
from Principal Cities of the East in  
New Upholstered Tourist Cars.

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This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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OF SWEDEN.

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The Only Stock Company on the Pacific Coast making a Specialty of

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Bet. California and Pine, SAN FRANCISCO, CAL.



## Patrons of Husbandry.

### Tulare Grange.

TO THE EDITOR:—Tulare Grange met at its hall on Saturday, Sept. 7th, all officers in their stations. Resolutions deploring the assassination of President McKinley were reported by a committee and unanimously adopted. The Grange also deplored the fact that a citizen or resident of the United States should be so base as to be capable of such a terrible crime and that our land of liberty should have given shelter to so vile a being.

President McKinley's great address at the Pan-American Exposition was warmly approved as typical of the American statesman and of the aims of the American commerce and American industries.

The proposed amendments to the constitution of the State Grange relative to the Lecturer's fund and to the change of time the State Grange is to meet was referred to a committee to report at the next meeting. Brother and Sister Eckles were elected alternates to the next State Grange.

A communication from the Secretary of the Twenty-fourth Agricultural district was received, asking the Grange to make an exhibit at District Fair to be held in Hanford next October, was laid over until the next meeting.

Sister Styles, having visited Yosemite valley this season, gave a short, interesting account of her trip, but added she could find no words to express her feelings of the beauty and sublimity of that valley and its surroundings.

Brother Morpheus Jacob, who visited the Pan-American Exhibition in July, gave a short and interesting account of his trip.

The subject of "Pear Blight and Peach Rot" came up and was fully considered. The time and manner of pruning, for health and shape of the tree and yield and quality of fruit, was discussed.

The subject given in the National Grange Quarterly Bulletin for September will be considered at the next meeting: "How Can Our Crops and Farm Products be Marketed to the Best Possible Advantage?" J. T.

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR WEEK ENDING SEPTEMBER 3, 1901.

- 681,673.—BOUQUET HOLDER—J. R. Angelovich, S. F.
- 682,022.—FISH TRAP—P. M. Benseth, Fairhaven, Wash.
- 681,844.—FLY ESCAPE—A. J. Collier, Yreka, Cal.
- 681,824.—SWITCH—C. F. Gay, Spokane, Wash.
- 681,911.—PERAMBULATOR—F. Genzlinger, Phoenix, Ariz.
- 681,913.—WAVE MOTOR—D. S. Gillespie, Los Angeles, Cal.
- 681,849.—HARROW AND ROLLER—E. S. Gordon, Santa Rosa, Cal.
- 681,788.—FIRE LIGHTER—J. W. Heaney, Los Angeles, Cal.
- 681,915.—CHECK BOOK—J. H. Hoffman, Springdale, Wash.
- 681,826.—COPYING PRESS—A. Howard, S. F.
- 681,827.—HAIR CRIMPER—W. G. Jackson, S. F.
- 681,828.—PUMP—G. A. Krohn, Coarse Gold, Cal.
- 681,829.—ENGINE VALVE—G. A. Krohn, Coarse Gold, Cal.
- 681,801.—DISTRIBUTING MACHINE—G. W. Lovejoy, Tehachapi, Cal.
- 682,093.—DENTAL APPLIANCE—W. T. Lyon, Oregon City, Or.
- 681,832.—NOTE BOOK—E. V. Mendenhall, Los Angeles, Cal.
- 682,103.—MILK—J. Meyenberg, Kent, Wash.
- 681,858.—STAMP MILL—F. B. Pettengill, Los Angeles, Cal.
- 681,751.—WRENCH—A. H. F. Straub, Lacerter, Wash.
- 681,753.—HARMONICA—E. Streiffler, Bisbee, Ariz.
- 682,155.—ELECTROLYTIC APPARATUS—Tatro & Delius, Seattle, Wash.
- 681,822.—TANK—Wallace & Isaacs, S. F.
- 682,006.—ELECTRICAL APPARATUS—I. G. Waterman, Santa Barbara, Cal.
- 682,007.—ELECTROMAGNETIC APPARATUS—I. G. Waterman, Santa Barbara, Cal.

## FOR RENT.

### 320-Acre Farm,

two miles west of Santa Rosa, Cal. One of the best in the State. Buildings and fields adapted to diversified farming or to the breeding of fine stock. Rent Five (\$5.00) Dollars per acre. S. B. WRIGHT, SANTA ROSA, CAL.

## THE VINEYARD.

### Grape Prices, Etc.

WINE ASSOCIATION OFFERS \$24 PER TON FOR GRAPES.—St. Helena Star: The California Wine Association has announced that it would pay \$24 per ton cash for all standard varieties. A large number of contracts have been made by outside wine makers on the basis of paying the same as the Association when it fixed its price for grapes. The crop this year is very short; and while the price of wine does not seem to justify the high price offered for grapes, yet wine makers have such confidence in the future of the industry that they are willing to compete for the product of the vine. We are informed that in a few instances contracts have been made on the basis of from \$1 to \$2 above the Association's prices.

VINTAGE OF 1901.—Livermore Herald: The vintage of 1901 has commenced and will be well under way next week. The crop is small. D. C. McNally, who is a close observer of viticultural conditions and who has inspected nearly every vineyard in the valley within the past few weeks, gives his estimate as half of last year's crop, which was itself scarcely more than half a crop. The yield in different portions of the district varies according to the extent in which they suffered from the frost, which is alone responsible for the shertage. The only buyers in the field this year are the Wetmore Bowen Co., California Wine Association and H. G. Wegener, all of whom represent local wineries. The prices being paid range from \$22 to \$30 a ton. There is a great scarcity of pickers at present and some of the vineyardists have been compelled to import Chinese and Japs, but they expect to replace these early in the season by the surplus laborers attracted to the hop yards.

GRAPE CRUSHING BEGINS.—Santa Press-Democrat: At Light's wine cellar, near Mark West Springs, grape crushing began last Monday and is now in full blast. Mr. Light is paying \$20 per ton for all varieties of grapes and will crush a large tonnage.

GRAPES BRING GOOD FIGURES.—Cloverdale Revolve: There are very few lots of grapes in this vicinity that have not already been contracted for. There was considerably more competition manifest than is usually the case, and in consequence the price of grapes in some cases reached a higher figure than at first quoted. The highest price that we have heard of is \$21.50 for choice lots.

PRICE OF GRAPES ADVANCING.—Healdsburg Enterprise: The price of grapes is advancing. Several crops have been sold during the past week for \$23 per ton, and some of the growers are holding out for a still higher figure. As was predicted in the early spring, when the heavy frosts destroyed the first buds, the crop is unusually light. Some vineyards suffered far greater than others, so a fortunate few will reap a golden harvest from this year's crop. It is most difficult at present to obtain men to harvest the crop. The growers commenced by offering \$1.25 per ton for pickers, and as it was impossible to obtain men at that figure the price quickly advanced to \$1.50. Representatives of Geyserville growers were in town during the week offering \$1.75 per ton, and the probabilities are that vineyardists will have to pay something like that price before their grapes are at the winery.

ADVANCE IN GRAPES.—Santa Rosa, Sept. 17: The price of grapes continues to advance and \$24 to \$25 is now being paid for the best varieties of wine grapes. The buyers at these figures appear to be mostly the smaller wineries in Sonoma and Napa counties. In Healdsburg, a few days ago, there were twelve buyers on the streets at one time, all bidding openly against one another.

Phylloxera-Resisting  
Grape Cuttings and Plants--  
**RIPARIA**  
Address BUSH & SONS,  
BUSHBERG, MO.



### MONEY IN HONEY!

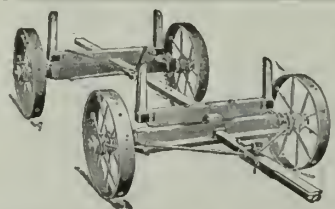
THE WEEKLY  
**AMERICAN BEE JOURNAL**  
Tells all about it.  
SAMPLE COPY MAILED FREE.  
G. W. YORK & CO.  
118 Michigan St., Chicago, Ill.

CATTLE DIE FROM ANTHRAX.—San Jose Herald, Sept. 16: Anthrax has broken out among the cattle on the Hassler ranch, near Evorgreen, and has already claimed eight victims among the herd there. The present epidemic began several days ago on the Hassler ranch. Two or three cattle died, and Dr. Spencer was called in to see what was the matter. He at once diagnosed the disease as anthrax, and began taking stringent measures to stamp it out. Gettlieb Hassler, a brother of John Hassler, whose cattle died, passed away a few days ago, death supposed to be the result of the bite of a tarantula. It is not improbable that the real cause of his death was anthrax. Gettlieb removed the hide from one of the cattle which died, and was stung on the hand soon after by some animal, possibly a mosquito. He scratched the wound, causing it to bleed. Soon after it began to swell, and before death he manifested all the primary and advanced symptoms of anthrax. It is not improbable that the disease was imparted to him from the cattle, and that when skinning the dead cow the germs lodged in his finger nails, which were afterward imparted to his blood.

SERIOUS TUSSELE WITH A WILD HOG.—Los Angeles Herald: Dr. B. F. Nemo and son, who live near Santa Ana, recently attempted to capture a wild hog. They ventured too near him in the bushes and he made straight for them. Singling out the doctor, the hog gave chase. Dr. Nemo is not much of a sprinter and the brute overtook him within the first hundred yards, grabbing him by the leg and throwing him to the ground. The enraged hog made for the doctor's throat, but he was kept from getting a death grip there until the son arrived with a heavy stick, which he used vigorously upon the pig. The beast turned his attention to Nemo the younger, and another race ensued. When almost overtaken, young Nemo turned and dealt the hog a terrific blow on the head. This stunned him and the young man ran to help his father, who was badly bruised. The hog recovered from the effects of the blow on the head in a few minutes, and after making a few circles, entered the head of Newport Bay, swimming to the opposite shore, a distance of fully half a mile, where he disappeared in the bushes.

### Deafness Cannot Be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces. We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free. F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c. Hall's Family Pills are the best.



## Farmers' Handy Wagon

FOR USE IN FIELD AND ORCHARD.

A Good Low Down Truck for the Fruit Grower.

—SOLD BY—

BAKER & HAMILTON,  
SAN FRANCISCO. SACRAMENTO. LOS ANGELES.

## California Fruits.

NEW EDITION (3rd). LARGELY REWRITTEN.

By PROF. E. J. WICKSON.

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| <p>Chapter.</p> <p>I. The Climate of California and Its Local Modifications.</p> <p>II. Why the California Climate Specially Favors the Growth of Fruits.</p> <p>III. The Fruit Soils of California.</p> <p>IV. The Wild Fruits of California.</p> <p>V. California Mission Fruits.</p> <p>VI. Introduction of Improved Fruit Varieties.</p> <p>VII. Clearing Land for Fruit.</p> <p>VIII. The Nursery.</p> <p>IX. Budding and Grafting.</p> <p>X. Preparation for Planting.</p> <p>XI. Planting Trees and Vines.</p> <p>XII. Pruning Orchard Trees and Thinning Fruit.</p> <p>XIII. Cultivation.</p> <p>XIV. Fertilizers for Fruit Trees and Vines.</p> <p>XV. Irrigation of Fruit Trees and Vines.</p> <p>XVI. The Apple.</p> <p>XVII. The Apricot.</p> <p>XVIII. The Cherry.</p> <p>XIX. The Peach.</p> <p>XX. The Nectarine.</p> | <p>Chapter.</p> <p>XXI. The Pear.</p> <p>XXII. Plums and Prunes.</p> <p>XXIII. The Quince.</p> <p>XXIV. Vine Propagating and Planting.</p> <p>XXV. Pruning and Care of the Vine.</p> <p>XXVI. Grape Varieties in California.</p> <p>XXVII. The Date.</p> <p>XXVIII. The Fig.</p> <p>XXIX. The Olive.</p> <p>XXX. The Orange.</p> <p>XXXI. The Lemon, Lime, Etc.</p> <p>XXXII. The Banana, Loquat, Persimmon, Pineapple, Avocado, Etc., Etc.</p> <p>XXXIII. Berries and Currants.</p> <p>XXXIV. Almond, Walnut, Chestnut, Peanut, Etc.</p> <p>XXXV. Fruit Canning, Crystallizing and Drying.</p> <p>XXXVI. Injurious Insects.</p> <p>XXXVII. Diseases of Trees and Vines.</p> <p>XXXVIII. Injurious Animals and Birds.</p> <p>XXXIX. Protection from Winds and Frosts.</p> <p>XL. Utilization of Fruit Wastes.</p> |
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## THE STOCK YARD.

Live Stock Awards at the State Fair.

SACRAMENTO, Sept. 13.—The stock and cattle exhibit at the State Fair is not lacking in quality this year, although several breeders have swept everything in their class. Sparks' Herefords, Frank Burke's Holsteins and Marzen's Shorthorns could win premiums at any fair in the country. The winners for 1901 are as follows:

**HORSES.**—Thoroughbreds: Best stallion, Burns & Waterhouse's First Tenor; best 3-year-old, Mrs. E. F. Smith's Impersiero; 2-year-old, Lone Stables' Discovery; yearling, E. N. D. McSweeney's chestnut colt; suckling, La Siesta Ranch bay colt; mare and colt, Lone Stables' Elise and colt; 4-year-old and over, Lone Stables' Margery; 3-year-old, E. N. D. McSweeney's brown filly; 2-year-old, E. N. D. McSweeney's Nonie; yearling, Lone Stables' chestnut filly; best thoroughbred dam and two colts, Wandering Nun and colt; dam other than thoroughbred and colt, Mrs. E. N. Callendine's Abbie Woodnut and colt; standard trotters, best stallion, Jesse D. Carr's Boodle, Jr.; stallion 4-year-old, Santa Rosa Stock Farm's On Stanley; stallion, 2-year-old, W. Tuttle's Zuomi; yearling colt, L. H. Todd-hunter's The Jester; gelding, E. P. Heald's Prince Howard; mare with colt, Mrs. McCord's Mary Lou; 4-year-old mare, Mrs. E. W. Callendine's Abbie Woodnut; 3-year-old mare, Mrs. E. W. Callendine's Lady Keating; suckling filly, Mrs. N. McCord's Zaza.

**Roadsters:** Best roadster gelding, Mrs. Frank Tryon's Don C.; mare, 4-year-old, W. H. Sayre's Maud. Class 4, coach horses: Best stallion, Dr. J. J. Summerfield's Dametal II; best stallion, W. A. French's Adonis; 3-year-old, H. S. Madison's Boxwood, Jr.; 2-year-old, H. S. Madison's General; yearling, H. H. Wilson's On Time; suckling colt, Dr. J. J. Summerfield's unnamed colt; gelding, Henry Klemp's Lyman; mare and colt, Dr. J. J. Summerfield's Maud; 4-year-old, H. Wilson's Fannie and colt; 3-year-old, H. H. Wilson's Lilly; 2-year-old, T. A. Nufer's Maud; yearling, H. S. Madison's Susie; suckling filly, H. H. Wilson's unnamed filly.

**Carriage teams:** Best span, Dr. A. M. McCollum's mare and gelding; best roadster team, B. E. Mulcahy; best fancy trap, Mrs. Homer Buckman's span of colts.

**Normans and Percherons:** Best stallion, Minnewawa Stock Farm's Hercules; mare, 4-year-old and over, Minnewawa Stock Farm's Isabella and colt.

**Clydesdales:** Best stallion, L. M. Ladd's Buffalo Bill, Jr.

**English Sires:** Best stallion, Meek Estate's Pride of the Prairie.

**Miscellaneous:** Best stallion, L. M. Ladd's Buffalo Bill; L. M. Ladd's Pompeii, Jr. Saddle horses: Eugene Maxwell. Best jack, Henry Klemp's Samson; best jennie, Henry Klemp's Sallie.

**CATTLE.**—Shorthorns: Best bull, Joseph Marzen's Sharon Victor; 2-year-old, W. B. Gibson's W. J. Bryan; yearling, Joseph Marzen's Nevada Boy; calf, 1-year-old, Joseph Marzen's Humboldt Victor XIII; cow, Joseph Marzen's Lady Elgin IV; 2-year-old, Joseph Marzen's Humboldt Maid, VI; yearlings, Joseph Marzen's Amelia B; heifer calf, W. B. Gibson's Belle of Woodland. Sweepstakes: Best bull of any age, Joseph Marzen's Sharon Victor VI; best

cow of any age, Joseph Marzen's Duchess of Humboldt.

**Herefords:** John Sparks of Reno won in every class.

**Holsteins:** Frank H. Burke of La Siesta Stock Ranch swept the boards in this class.

**Jerseys:** Best bull, Henry Pierce's Panwood; 2-year-old, Peter J. Shields' Mentome; 1-year-old, Thomas Waite's Napa Boy; calf, C. V. Osborn's Duke Onyx; cow, Peter J. Shields' Oletas Alpha; 2-year-old, Peter J. Shields' Pedros Prudence; 1-year-old, Henry Pierce's Eye of Y. B.; best heifer calf, Henry Pierce's Lizetti of Y. B.; herd, 2-year-old and over, Peter J. Shields; best bull, Henry Pierce's Panwood of Y. B.; best cow, Peter J. Shields' Oletas Alpha.

**Grand sweepstake, beef breeds:** John Sparks, Reno, McCord and four cows; bull, 3-year-old, Joseph Marzen's Sharon Victor; 2-year-old, John Sparks' The Grove; 1-year-old, John Sparks' Perfection II; calf, Joseph Marzen's Humboldt Victor IV; cow, John Sparks' Ida May; 2-year-old, John Sparks' Pandora V; 1-year-old, John Sparks' Phoebe Allen.

**SHEEP.**—French Merino: J. H. Glide of Sacramento won all premiums.

**Southdown:** Best ram, George Bement's Billy; pen of five ewes, Thomas Waite; ram and five lambs, George Bement's Hony.

**Dorsethorns:** Best ram, S. B. Wright's Locust Grove Lad.

**Persian:** C. P. Bailey of San Jose.

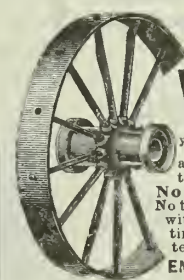
**GOATS.**—Angora: C. P. Bailey of San Jose took all the premiums.

**SWINE.**—Berkshire: S. B. Wright had the most winners, followed by Thomas Waite and Sessions & Co.

**Essex:** George Bement carried off all the prizes.

**Poland-China:** S. P. Lindgren of Kingsburg won most of the premiums. Sessions & Co. and W. R. McCaslin secured blue ribbons in several classes.

**Sweepstakes:** Best boar, S. P. Lindgren's Chief Perfection; sow, W. R. McCaslin's Midnight; boar and three sows, Sessions & Co.'s Ideal Chief; best four swine, S. P. Lindgren; best pen and six pigs, S. P. Lindgren.



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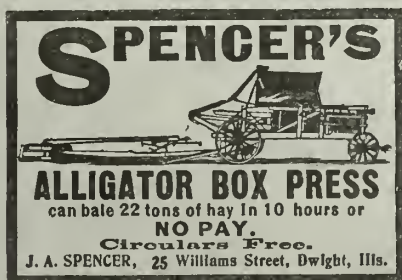
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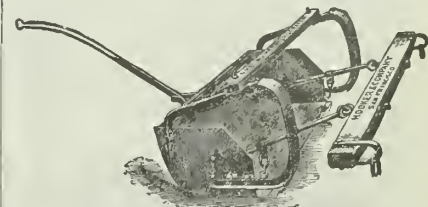
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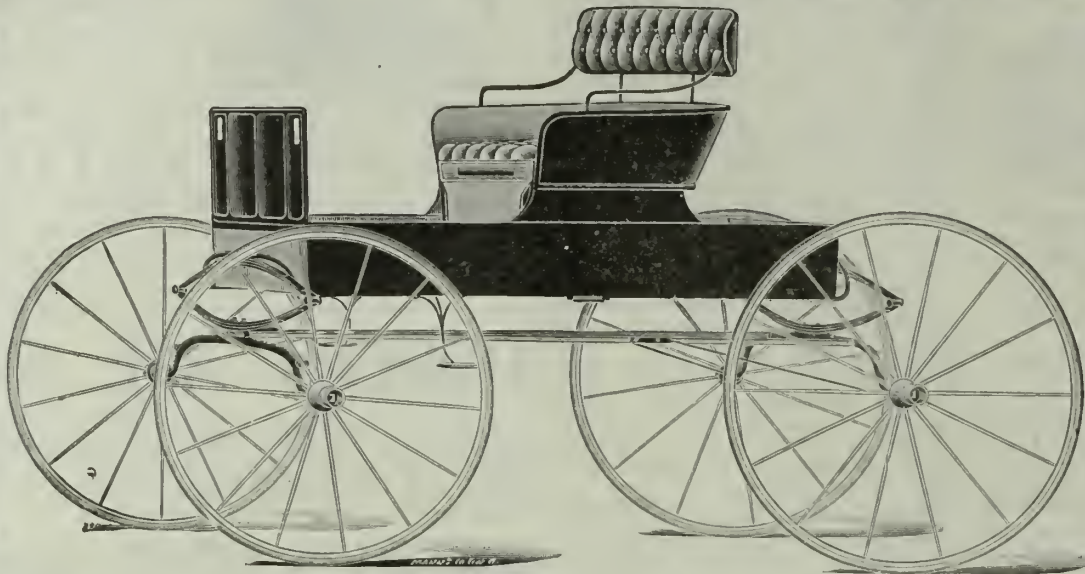
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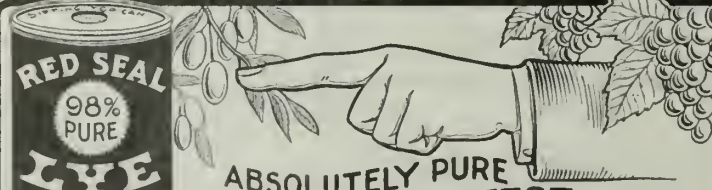
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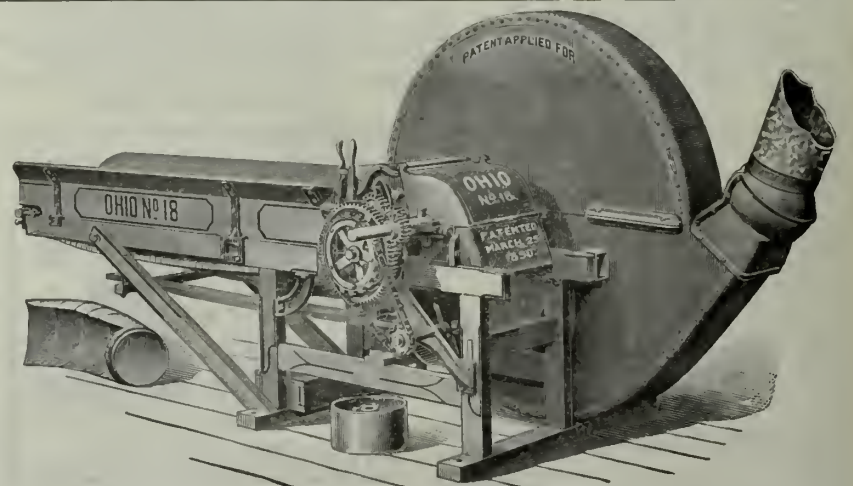


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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 13.

SAN FRANCISCO, SATURDAY, SEPTEMBER 28, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### In the Idaho Mountains.

In one heritage at least all the Pacific slope commonwealths share, and that is unique and charming natural scenery. All the way from tropical Central America to frigid Alaska are to be found scenes differing from each other, and yet all characteristic in that they not only constitute a very young portion of the earth crust, but they have carried their fewer millions of years amid conditions which more slowly deface the marks of eruption, glaciation and erosion than those which prevail in other parts of the continent. For this reason the Pacific coast scenery is usually bolder and fresher in form and color than that in regions of the earth where a soil mantle has almost wholly formed and where outline has been reduced from angles to curves. Vegetation, too, is unique and characteristic, and this adds to the distinctiveness which is widely noted by tourists and critics.

In the mountainous region of Idaho there are many natural scenes which, because of their beauty, should be more widely known. The southwestern portion of Idaho is making notable advance as a fruit-growing country, and irrigation is being used to great advantage in the production of fruits, which are each year commanding wider attention. The mountains which overlook this wide stretch of valley land become thus of industrial moment as the source of irrigation supplies. But there is usually a pioneer industry which precedes agriculture, and central Idaho is typical of many localities possessing attractive, charming scenery that would have remained inaccessible, if not, indeed, unknown, but for the discovery of dormant resources of mineral wealth.

The illustrations on this page are glimpses of a scenic paradise in the heart of a rich region. The Seven Devils country and the basin of Salmon river are rugged and mountainous, and have long been remote from settlement, but during the past few years the advancing fringe of settlement pushed the pioneer prospectors forward into it. Now that the way is broken and roads built by the miners, the country is found to have additional possibilities of wealth production from grand natural scenic attractions. Hotels and summer homes, and the facilities

that attend on social life, will in turn aid to more complete discovery and exploitation.

### The Year's Fruit Shipments.

The citrus year is drawing to a close. The Los Angeles Times says that since November 1, 1900, there have been shipped a total of 23,761 carloads of citrus fruit, of which 2733 carloads were lemons and 21,027 carloads were oranges. The shipments now are only a few carloads a day, and probably will be less between this date and the last day of October, when the season closes. The total will not vary much from 24,000 carloads, and the oranges will not go much above 21,000 carloads, leaving something less than 3000 carloads of lemons. As to the gross value of the crop, Mr. A. H. Naftzger, manager of the Southern California Fruit Exchange, says that his organization shipped and disposed of a little more than 11,000 carloads of citrus fruits during the season just ended and collected a gross sum of a little more than \$8,750,000. Assuming that the remainder of the crop was sold at as good an advantage, it may be seen at a glance that the orange industry of the State amounted to between \$16,000,000 and \$17,500,000 for the season.

The deciduous fruit shipments promise to be less than last year. In a statement of fruit shipments, issued by the Southern Pacific Co., it is shown that for the season ended September 1st 42,015 carloads



Moon Lake; Thunder Mountain, Idaho.



Payette Lakes, Boise Co., Idaho.

were shipped, against 47,081 for the corresponding period of last year—a decrease of 5066 carloads. The difference is still more marked when it is stated that the cars now are loaded with twelve tons, while those of last year carried thirteen. The reason of this is the falling off this year in the crops of cherries, early peaches and apricots.

CONSUL-GENERAL HUGHES of Coburg reports that the German trade papers advise butter packers to ship first-class butter, carefully packed in heavy tin boxes, to the different Chinese ports. Shanghai, they say, takes about \$100,000 worth of European butter, packed in one-half, one and two pound tins, the selling price being about 60 cents a pound. Extra California butter, packed in one-pound glass jars, brings \$1.75 per pound; but, of course, the sale of such a high-grade article is limited. The packers are advised that a good mark of butter, once well introduced, will have a permanent sale. Japan and the Philippines are also said to be promising markets for good butter. These are things which Californians have long wished to know, and we hope the German reporters have not exaggerated them. We shall know more about it, however, when the experimental shipments made by the Department of Agriculture via San Francisco are reported upon.

CONSUL CANADA reports from Veracruz that, by a recent Mexican treasury decision, duty on oleomargarine will now be collected under a section of the tariff, which reduces the duties from 75 cents to 20 cents Mexican currency per kilogram.





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E. J. WICKSON..... Horticultural Editor.

San Francisco, September 28, 1901.

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## The Week.

The season has changed with a rush and a rainfall passing the ordinary has nearly covered the State. In some places the amount of rain is vastly greater than ever before in September, and on Wednesday the weather still seems unsettled. There has undoubtedly been much harm done to exposed products and ungathered fruits, but much has been brought under cover in anticipation of the storm. If the storm is an indication of what the whole season will be, there will be louder rejoicing than complaint, and if there should now follow clear, dry air for a month longer the injury would be lessened considerably. The disappearance of the dust, the cleansing of trees, shrubs and buildings, and the increased confidence of all in the future are signs of good in the storm which all can readily appreciate.

Wheat is sagging a little and options seem against the selling interest, but the spot market is unchanged. Some movement is taking place; one full and two part cargoes have gone out. Barley is meeting notable movement; 1500 tons, worth a quarter of a million dollars, have gone abroad, including one steamer load of 5000 tons. Barley prices are steady for export, but rather easy for feed. Oats are declining; local supplies are now larger and more are not wanted except at lower figures. The Government has taken some oats on the Sound and some here during the week. Corn is high and scarce and little arriving. Rye is still going to Europe, but at low prices. Beans are weak for Large Whites and Bayos; others are holding up well as arrivals are light. Bran is easier, as the mills are running again and cheaper bran is expected. Ordinary hay is weak and choice is firm and may go higher if the rain has spoiled as much as some are anticipating. Beef and mutton are unchanged and hogs are easier without decline, although the packers have slowed down a little. No break is expected as the Eastern markets are firm. Butter is still quiet and weak with large amounts coming out of storage. Cheese is in light supply and fair demand. Fresh eggs are in light supply but large receipts of Eastern are noted and stored eggs are being brought out freely. Fresh eggs are being held up to help these goods. Poultry is recovering and supplies cleaning up better, but there is no marked improvement yet. Potatoes are slow and unchanged, while onions improve under larger inquiry and lighter offerings. Fresh fruit is about the same: choice is bringing fair prices. Lemons are weak and quotations being reduced, although limes are higher be-

cause of arrivals in bad condition and needing picking over. Dried fruit is quiet, as jobbers have enough for present use and the Eastern markets are not taking stock very fast. Raisins are stationary. Some new prunes are selling at 3½ to 3¾c and old prunes ¼c less. Almonds are steady. Walnut prices are now fixed, as noted in our Market Review this week. Honey is offering more freely and moving slowly without change in prices. Hops are still unsettled, buyers and sellers being about 5c apart. Wool is locally quiet but firm. Buyers are mostly at Red Bluff this week. Choice fine wools are in good demand.

On another page is a very carefully prepared address by ex-Senator Wm. Johnston at the Dairy Convention, which all in that interest should read and ponder. Senator Johnston has always been a leader in this line by virtue of his broad views and his own good dairy work, but this last address of his seems to us the best he has ever made. May he live to make many others.

The Prune Association seems to be slowly disintegrating, and just what may remain of it does not now clearly appear. At San Jose there is reported quite a feeling toward winding up the affairs of the organization and a committee of members is endeavoring to secure consent of members to such proceeding. The directors of the Association are severing their connection with the packers, and at a meeting on Tuesday of this week announced that this result had been arrived at. In the Sacramento valley there is a vigorous protest against closing up the affairs of the Association and a center for co-operative packing and warehousing in that part of the State is proposed. This would supplement the packing establishment provided for the San Jose region at Santa Clara. It seems likely that enough of the Association may remain to serve as a nucleus for new organization next year when a larger crop of prunes may have to be provided for. This may be the best that can be done this year. In the future new needs for organization will arise and it is to be hoped that fewer difficulties will be encountered and wiser work be done.

As we go to press on Wednesday, the Wheat Growers' Convention, of which full details have been given in our columns, is in session. It is too early to secure the results of the meeting. There were 240 delegates present, representing twenty-four counties. The report of the committee previously appointed to inquire into the situation which prevents movement of wheat at tide water, prepared a report, which is found upon another page of this issue. It will be seen that the committee very clearly places the blame, and sees no chance for free loading of ships except under the personal protection of the growers or their representatives. Whether the convention will see another recourse will soon be known. The fact is that since the committee prepared its report the strikers have weakened considerably, and as we write on Wednesday there seems reason to anticipate that the trouble will soon disappear. The striking workmen in several lines are returning to work and others will haste to do so as soon as the managers relax their hold upon them, if not before. If this should be speedily realized the grain growers might soften their mood a little. It cannot be denied, however, that their firm attitude in defense of their interests has had much to do with the retirement of the strikers from their bold front. It is too bad that this element was not sooner introduced into the controversy. The Wheat Growers' Convention seems disposed to proceed to permanent organization in defense of their industry, which is not receiving fair treatment from transportation interests. All the way from the field to the foreign purchaser the wheat is taxed severely, and there may be a way to improve the conditions. We shall next week outline the transactions of the convention.

Raisins are moving, although the price has not been fixed. The Growers' Association has given its consent enabling the approved packers to ship raisins East before the prices for the season shall have been named, thereby giving the Association packers an important advantage over outsiders.

## QUERIES AND REPLIES.

### Walnut Growing.

TO THE EDITOR:—We have land in Orange county and wish to have a walnut orchard. Within a few miles of the place are orchards infected, and upon sending branches and nuts to Washington I learn that they have been attacked by three fungi, viz., *altaria*, *macrasporium* and *fusarium*, the greatest damage having been done by the first mentioned. We do not understand the nature of these diseases. By taking precautions, could we prevent their spreading to our place?

The land has a wet subsoil. It is probably 10 or 15 feet to water now. We will not be able to get a pumping plant for a year or two, but could water a small nursery from tank and windmill. Can we plant the native walnut and bud to Persian walnut to secure hardy trees and a superior and uniform fruit? Would you advise that plan? — A. H., Ventura county.

No doubt the specimens which you sent to Washington contained fungi which you mention, but a more serious trouble in California, and one which is commonly called the "walnut disease," is caused by bacteria which circulate freely in the sap of the plant and affect the leaves, the new wood and the nut. A full account of this disease is given in the PACIFIC RURAL PRESS of August 17, 1901.

Usually a good, free soil with 10 or 15 feet to water is satisfactory for the walnut, and whether you need irrigation or not in your locality will depend upon the season's rainfall and the behavior of the tree after it comes to the bearing age. Under ordinary conditions there would be no difficulty about growing good trees without irrigation for several years and you can determine your need of water supply later. The English walnut succeeds well upon the California black walnut root, and in the central part of the State is largely grown upon that stock. In the southern California regions, however, the trees are grown upon their own roots and budding is seldom resorted to except to secure uniformity in type of the nut, because the English walnut seedling root succeeds well in good soils in your part of the State. There is, however, so much variation in the fruit of seedling trees that budding is being more widely resorted to than formerly.

### Seedling Figs.

TO THE EDITOR:—Kindly inform me in your valuable paper, to which I subscribe, whether figs make good seeds which will germinate, if planted, without caprification. I was shown a bunch of young fig trees, about twelve to fourteen in number, in open woods, away from any habitation. No one can tell how they got there. They are of different sizes, the largest 4 feet, the smallest 1 foot, covering a spot of ground about 2 feet. They look to me like the black fig, leaf and wood.—C. F., Ocean Springs, Miss.

Some varieties of figs make good, fertile seeds without caprification; others do not. The fig of commerce is of the latter class, hence the great efforts made to introduce caprifying insects to California, which has now reached satisfactory results. In your case, however, this case does not necessarily enter, for it would be very reasonable to suppose that some one had dropped in the place you mention one or more of the dried Smyrna figs which are so widely sold throughout this country. These figs are caprified in their native country and the drying does not injure the seeds for germination; in fact, it is quite easy to get seedlings from dried Smyrna figs if conditions are right for their sprouting and growing. This was first done in California more than forty years ago, and has been frequently done since. The seedlings differ widely in character and you cannot tell anything about what kind of a fig is secured until the fruit is borne. Leaf forms are very variable in the fig. Though this seems the most reasonable way to account for the singular bunch of seedlings you describe, it is, of course, possible that the seedlings may have come from some stray fruit grown in your region which may have been of a variety not requiring caprification. It would be interesting to plant out the seedlings and fruit them. Some good variety might possibly be secured, though most of them will probably be of no account.

### Inter-Crops in Orchard.

TO THE EDITOR:—I have noted the satisfactory answers to questions in your columns and I would like your opinion as to what kind of crop can best be planted between young trees. The soil is a mixture of adobe and washings from the hills (near Evergreen),



Santa Clara county. How would Loganberries or currants do?—SUBSCRIBER.

In almost all cases it is better to give all the land to the trees. If, however, immediate income is an important matter, some inter-cropping can be safely done, providing there is moisture enough for both the trees and the crop. This is seldom the case except on deep, moist land or where irrigation can be used. Small fruits are frequently successfully grown between trees under these conditions, but it is little use to undertake any small fruit where moisture is apt to be short. The safest crops for the trees are winter crops like peas, beets, cabbage and, where there is little frost, potatoes. For summer crops, tomatoes, corn and squashes are frequently grown. Loganberries are now being quite largely grown in young orchards; currants should only be planted in localities where they are known to fruit well, for they are rather finicky and not always profitable.

#### Unprofitable Almonds.

TO THE EDITOR:—I have two acres of Nonpareil almonds, seven years old, and as they do not bear well, am thinking of working them over to apricots. I have noticed that both in your book on "California Fruits," as well as in the PACIFIC RURAL PRESS, you advise against using almond stock to this end, but I would like to know if same objection would stand against budding. My idea is that one could cut out the entire tree, excepting one limb, and force out a new growth and bud into them.

Can you give me an idea as to what a seven-year-old almond tree should yield? As to size, shape and bright color my trees invariably bring forth some favorable comment from people coming onto the place, but I find that it does not pay to cultivate and care for these trees for show purposes.—SUBSCRIBER, Newcastle.

Do not try to put an apricot on almond stock. Most trials have been made by budding, because that is the common way of propagating, and we only know of failure, though good growth may be made for some time. You can work prunes and peaches on almonds in the manner you describe.

The almond yield is from nothing upward and it is very hard to get at an average or a standard yield. An instance is given under Sutter county on page 199 of this issue of a very large yield of a few trees. Twenty-five pounds of clean nuts to the tree would be good enough for anybody and even ten pounds would pay. The looks of the tree has little relation to bearing. Some of the loafer trees are handsomest. Almonds are sometimes helped in bearing by budding in other varieties on part of the trees, but in some localities the trees are only useful for firewood and many of them have gone that way.

#### Pruning Prunes.

TO THE EDITOR:—Will you kindly give me your personal opinion as to the advisability of pruning two-year-old prune trees, under the following conditions: The trees were planted in January, 1900, and though they had no rain to settle their roots till the following December, they made a reasonably good growth. They were cut back last winter barely enough to shape them, and this year made a growth of 5 to 6 feet; they seem remarkably thrifty. They were summer-thinned to five and seven limbs and are now 8 to 10 feet high. Will it be wise to allow them to continue growth without cutting back? The soil holds moisture well and is exceptionally rich and fertile.—ORCHARDIST, San Jose.

We should shorten in once more, to induce branching, unless your main branches are now well supplied with them. If your summer thinning of the growth has removed laterals so that your long branches are thin and scant, we would certainly shorten them to get side growth and more stockiness. We would not cut back after this year, but thin out long shoots, to prevent the head from becoming too thick, saving the spurs and other short growth for future bearing as low down as possible.

#### Red Spider.

TO THE EDITOR:—Will the lime, salt and sulphur spray kill the eggs of red spider when the trees are dormant? I sprayed an orchard this summer with kerosene emulsion and the spiders seemed to thrive on it. The trees are literally covered with them.—ORCHARDIST, San Jose.

Winter washes certainly will not kill all the eggs of the red spider. No matter how many are killed there will always be enough to quickly repopulate the trees. Kerosene emulsion kills spiders but does not kill eggs. The insects must be struck several times during the summer to keep them down. It is almost

sure that good winter spray, with properly prepared lime, salt and sulphur wash, will help in next summer's work by reducing the early hatching, but strike them again as soon as you find them hatching next spring.

#### Bees and Cherries.

TO THE EDITOR:—We want a large crop of fruit next year, especially of cherries, which sometimes drop, perhaps, from lack of pollination. Will bees help the pollination? If so, where can we buy some, preferably Italian bees? When is the best time to ship the animals? We do not know the A B C of keeping bees.—JOHN SWETT & SON, Martinez.

There seems little room for doubt that bees help notably in this line. The experience of many growers points clearly this way. Those having bees for sale should advertise them, for fruit growers are thinking a great deal about diversifying in the bee line. It may be that orchardists in other parts might hire some of the bees which are to be moved out of the Hanford region during the pear-blooming season. Keeping bees is very interesting, and all fruit growers should master its leading details. A start can be made by securing a copy of Prof. A. J. Cook's "Manual of the Apiary," a new edition of which will soon be ready and can be ordered through the PACIFIC RURAL PRESS.

#### Coyote Trapping.

TO THE EDITOR:—Do you not yourself, or are there not those among the numerous readers of your valuable journal who know and will divulge the secrets of successfully trapping the coyote? He is a very destructive pest in this section as well as in other parts of the State. I heard of some trappers last winter who were very successful in taking the coyote. I was told that they used a stinking compound of very strong odor to attract the animal to their traps which were set, three near together, very carefully covered or concealed; but the secret of their success depended upon the strong smelling compound the ingredients of which they would not divulge.—SUBSCRIBER, Shasta county.

Will some one help us along this line? Something must be done with the coyotes, for they are becoming very abundant and bold. They are taking to running along the streets of some of the interior towns looking for chickens. Let us have a free contribution of knowledge which will help to repress them.

#### Better Than Zante.

TO THE EDITOR:—I would like to try the Zante grape or Zante currant, as it may be called, in the New River country, San Diego Co. Where could I get it? Has it been tried in this State?—ENQUIRER, San Diego county.

The Zante grape has proved commercially unsatisfactory in California. The variety has been grown by different people in different places for the last thirty or forty years, but has never secured a foothold. It sometimes has seeds, which are, of course, against it, and it is open to other cultural objections. Perhaps more would be done with it, however, were it not that the small seedless raisins made from the Sultana and Thompson's seedless varieties are immeasurably better and sell for more than Zante raisins could bring, and are at the same time far stronger and more prolific. You can get any of these varieties from California nurserymen.

#### Durable Whitewash.

TO THE EDITOR:—Please give an old subscriber a recipe for a good, practical whitewash for the exterior of barns, chicken houses, etc.—something that won't scale off in a hurry. Have plenty of skim milk.—WHITEWASHER, Volta.

Half a dozen thoroughly good recipes for durable whitewash were given on page 380, PACIFIC RURAL PRESS, of June 15, 1901. We have no recipe including skim milk, though we are aware that it can be used to advantage. Will some reader give the recipe for such a whitewash?

#### Shade Trees.

TO THE EDITOR:—Kindly inform me what variety of shade tree is best adapted to this section. I want to plant some around my house, something that will grow quick and give plenty of shade, Australian gum excepted.—H. J. SEEGLKEN, Los Gatos.

There is, of course, a large list to choose from according to taste. If we were planting we should choose the pepper tree and acacia mollissima for evergreens and the California or broad-leaved maple for a deciduous tree.

#### Chicory.

TO THE EDITOR:—Can you give the name of the plant I send. It grows about 2 feet high on roadsides and bears a beautiful blue flower which closes during the heat of the day.—AGRICOLA, Napa.

The plant is chicory (*Chicorium intybus*) which has escaped from some one's garden in time past. It has a way of doing this. There are acres of it on vacant land near Berkeley, and its bright bloom adorns the landscape. It is, however, a desperate weed when it gets where it is not wanted, as it seeds very freely and travels fast. It is the same plant which is commercially grown for improving coffee and the root is also of culinary account.

### WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending Sept. 23, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

#### SACRAMENTO VALLEY.

Warm weather prevailed during the first of the week, changing to cooler on the 18th. Rain commenced Saturday night, continuing at intervals through Sunday and Monday. At Red Bluff the rainfall up to 5 o'clock Monday morning amounted to 1.36 inch. Grain, hay and grapes have probably been considerably damaged, but, as ample warnings had been given, the damage to raisins and drying fruits will be light. The second crop of grapes is being gathered; the yield is below average in some places. Oranges continue in excellent condition, and a good crop is expected. The olive crop will be light.

#### COAST AND BAY SECTIONS.

The cool, foggy weather along the coast has been unfavorable for fruit drying, and rain at the close of the week has undoubtedly caused considerable damage to grain in the sack, unbaled hay, grapes on the vines and beans. Ample warnings had been given, and it is probable that drying fruits and raisins on the trays were not seriously injured. Frosts on the 8th and 16th seriously damaged corn, potatoes and tomatoes in the vicinity of Ukiah. Hop picking is nearly completed; the yield is below average in some places, but the quality is excellent. Sugar beets are turning out well in San Benito county. Grain thrashing and hay baling are progressing. Prunes are yielding better than expected in some places. Apples are plentiful and of good quality; in Sonoma county the crop is the best for several years.

#### SAN JOAQUIN VALLEY.

The weather was warm with cool nights the first part of the week, and cool and somewhat cloudy the latter part. Raisin making and fruit drying have progressed rapidly, and a good portion of the first crop of raisin grapes is on the trays. Large quantities of grapes are being shipped, and the wineries are in full operation. The grape crop exceeds early estimates in many places and the quality is good. Deciduous fruit drying is nearly completed except the later varieties. The first raisins of the season were marketed at Hanford on the 20th. The prune crop is light, and the olive crop less than last year. A good crop of sweet potatoes is being harvested. Most of the grain crop is stored in the warehouses. Rain began to fall Monday morning, and will cause a great amount of damage to grapes on the vines, unprotected grain and fruit on the trays.

#### SOUTHERN CALIFORNIA.

The weather has been favorable for crops during most of the week. Grain thrashing and hay baling are nearly completed. Bean harvest has commenced in Ventura county; the yield is excellent. Sugar beets are being gathered; the yield is exceptionally heavy in some sections. Potatoes are doing well. Walnut picking will begin in a few days; the yield will be much better than last season's in some sections. Grape picking is progressing rapidly, and raisin making has commenced. Citrus fruits are in good condition. Rain at the close of the week has probably caused some damage.

EUREKA SUMMARY.—Rain will interfere with late thrashing, but greatly benefited vegetables and pasture. Fruit prospects continue good.

LOS ANGELES SUMMARY.—Cool, foggy weather retarded beets in some localities; gathered in some sections. Salway peaches being harvested. Almond harvest continues; many blown off. Bean cutting commenced.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, September 25, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....	1.88	2.05	.28	1.21	66	48
Red Bluff.....	1.46	1.46	.26	.66	62	46
Sacramento.....	.56	.56	.06	.29	78	48
San Francisco.....	.67	.67	.46	.38	62	52
Fresno.....	.08	.08	.08	.26	94	46
Independence.....	.00	.33	.83	.37	90	40
San Luis Obispo.....	.28	.28	T	.34	74	44
Los Angeles.....	.06	.06	T	.12	78	48
San Diego.....	.06	.06	T	.11	70	56
Yuma.....	.00	.22	.02	.66	104	54



## THE DAIRY.

### California Dairy Conditions and Progress.

Annual address of HON. WILLIAM JOHNSTON of Courtland, President of the California Dairy Association, at its convention last week in Sacramento.

I am pleased to welcome you on this occasion and to inaugurate the eighth annual convention of the California Dairy Association. The conditions under which we meet are favorable to our industry, and during the year which has just passed California has done her share toward the accomplishment of that great dairy development which is her certain destiny. Commercial and physical conditions have been favorable to dairying during the recent year. The average price for dairy products has been fairly good, and the demand such that all our butter, cheese and milk has gone into rapid consumption. The rainfall during the recent year was sufficient and well distributed, and the native pasture and cultivated crops have been abundant and favorable to a large dairy product.

**STATISTICAL ASPECT.**—From statistics collected by the State Dairy Bureau it appears that over 28,700,000 pounds of butter were manufactured in California during the year 1900. Of this quantity over 16,400,000 pounds were manufactured in creameries and the remaining 12,300,000 pounds were manufactured under the individual or private dairy system. These figures speak eloquently of the growth of the creamery system, as for the year 1897, but three years previous, when the product was almost the same, but 16,800,000 pounds were made in creameries, while over 17,800,000 pounds were manufactured under the private dairy system.

The great proportion of our butter now manufactured in creameries has led many to prophesy that at an early date this will be the exclusive method by which butter will be manufactured in California. I do not believe this to be true, and would regret that it should be. The time will probably never come when there will not be a field for dairy products manufactured in private dairies under the exclusive control of skilled and capable managers who will give to every detail of their management their personal and experienced attention. In the evolution of dairy development constant improvement is made in the creamery system, and the present creamery product is of a very high and praiseworthy character, but from the nature of things—the variety of patrons, the many sources from which the milk is procured, its transportation to the skimming stations, and its skimming and transportation to the central creamery—permits of so many chances of contamination and deterioration that it will be many years before the business is so systematized that creamery butter should, upon its merits, supersede the product of the finest private dairies. There will always be a field for the private dairy, and its manager who understands his business, and who has under his personal control every detail of management, from the breeding of the dairy calf to the making of the butter from the mature cow, will always make a success of his business. This constant competition between the two systems will provoke that care and attention which will result in the highest product and the practice of the best methods.

**TUBERCULOSIS QUESTION.**—The most important development during the current year, affecting the dairy interests, has been the announcement by the famous bacteriologist and chemist, Dr. Koch, that bovine tuberculosis is not communicable to humanity through the medium of the meat of cattle or the consumption of dairy products. Dr. Koch is one of the most famous authorities upon this question in the world, and the expression of his opinion upon a question of this character has all of the sanction of positive authority. During many years the opinion has been freely expressed that the most fruitful source of human consumption was the eating of contaminated meat and the use for food of dairy products from cattle affected with bovine tuberculosis. During recent years this opinion has raged, and physicians, veterinarians, dairy associations, breeders and the press have lent themselves as agencies for its propagation. Cattle of incalculable value have been destroyed and the consumption of dairy products very much restricted by reason of this agitation, which has been prosecuted with a vigor almost unexampled. During all of these years the conservative mind has failed of conviction, and the ablest of the theorists have been unable to establish the correctness of their doctrine. The excitement, as a consequence, has been subsiding and the world was prepared for the statement of Dr. Koch, which has dealt the last blow to the fanatics, the alarmists and the theorists who have been teaching this false doctrine of danger at the expense of one of the oldest and greatest of human industries. We cannot too enthusiastically congratulate ourselves upon the practical establishment of the fact which means so much to the interest in behalf of which we are organized, and to the world at large. By reason of the dangers which were so reputed, and apparently with such authority stated, to lurk in dairy foods the consump-

tion of these most healthful and nutritious of all food-stuffs has fallen off to the great injury of our business. We may confidently look for a revival of confidence in the healthfulness and value of milk, butter and cheese, the use of which many have surrendered, and which others have used with a sense of uneasiness and in some cases alarm. This is not only a gain to our industry but to the world, to which is again given with renewed confidence the most economical, the most healthful and the most nutritious of all the foods with which a lavish providence has blessed it.

**DAIRY EDUCATION.**—The dairymen of California have long desired the establishment of a dairy school, similar to those conducted in many of the more progressive Eastern States, in which our young men might be taught scientific dairying, the latest and most improved methods of breeding and feeding dairy cattle, and of manufacturing and preparing dairy products. A strong effort was made by officers of this association and dairymen generally before the Legislature, at its recent session, to procure an appropriation for the establishment of such a school, but for a variety of causes, to which it is not necessary here more particularly to refer, this legislation failed of enactment. A large appropriation, however, was made for the use of the State University, and its regents have seen fit to set aside \$10,000 of this sum, out of which to provide for the maintenance of a dairy school at Berkeley during the next two years. This school has not yet been inaugurated, nor am I at this time informed of the scope of its instruction, or the extent to which it will meet the wishes of our people. The agitation, however, in behalf of this school has been productive of good results, and this movement of the regents shows an inclination to meet the wishes of the dairymen, which, when properly presented, may lead to such an enlargement of their present provision as will be sufficient and adequate. [The dairy school will open October 1, and a circular giving details of courses of study, etc., can be had by addressing the College of Agriculture at Berkeley.—ED.]

**LEGISLATION.**—Patrons of creameries generally throughout this State are paid for their milk in proportion to its richness, which is determined by the Babcock testing apparatus. As a consequence their proper payment is dependent upon the accuracy and honesty of the appliance used. A member of our board of directors prepared a bill making it a crime for the managers, owners or operators of creameries to use any testing apparatus or appliance which did not correctly register weights, percentages, etc., and this bill, through the friendly disposition of many members of the Legislature, and especially through the efforts of the Senator who introduced it, has been enacted into a law.

The great legislative measure, however, which interested not only California but the nation was what is known as the Grout bill, pending before Congress. This, in short, was a bill by which it was intended to levy a high tax upon oleomargarine colored in imitation of butter, and a much smaller tax upon oleomargarine manufactured in its natural color. This bill was urgently pressed by the dairy interests of the United States, but by reason of the very effective opposition of large interests and a mistaken friendship of many of the breeders of beef cattle it failed of passage. It is expected that this bill, however, will be renewed in the approaching session of Congress, and it is to be hoped that every member of this association, and dairymen generally throughout the State, will unite in a pressure upon our Congressional delegation, both in the House of Representatives and the Senate, to see that they not only give this bill their votes, but their personal, active and forceful support.

**WIDER INTEREST DESIRABLE.**—It is a regrettable circumstance that the annual sessions of the association are not attended by a much larger number of persons interested in the dairy industry. Dairymen generally have everything to hope for from closer organization and a better understanding of their own wants which would follow such association. If our dairy interests were united they represent such a volume of property and such a strength of personality that they could influence legislation not only before our own State Legislature but before Congress, to the great advantage of the dairy industry. They should be organized to make known their wants, and by reason of the magnitude of their organization be in a position to enforce their wishes.

California dairymen generally are interested, for example, in the membership of the State Dairy Bureau, the board of directors of the State Agricultural Society, and of the regents of the State University. When appointments to these positions are due they have been almost wholly without organized representation by which to present their wishes or ask for a proper representation upon these important boards.

**THE DAIRY CONDITION.**—The present condition of the dairy interests of California is favorable. The creamery system is making a rapid and steady progress, and the quality and character of our butter product is constantly improving. In California, where the physical conditions are so perfect, the climate so even, dairy food so abundant and cheap, we should produce the best butter and cheese manufactured in

the United States. We have not done this in the past, and it should be the aim of our dairymen to progress up to that point without delay. The quantity of butter manufactured in California is rapidly increasing, and some uneasiness is felt in certain quarters lest we reach the point of overproduction. That day, however, is yet far distant. We manufacture such a small quantity of cheese in California that we come nowhere near supplying the home demand. We should, and will soon, exert our energies in that direction. When we do, so large a quantity of milk will be diverted from the manufacture of butter to the manufacture of cheese that we will thus reduce our butter output. Another relief from overproduction is our increasing export to Asiatic countries and to the Pacific islands. This market should be cultivated, and gives promise of attaining large proportions. Another and probably one of the greatest reliefs from a condition of overproduction would follow the removal of the fear of disease from consumption of dairy food products, their use would be very largely increased.

**WHOLESOMENESS OF DAIRY PRODUCTS.**—Dairy organizations, papers and individuals have frequently been most unwise in calling attention to the possibilities of diseased milk products, and to the fact that such food might so easily become uncleanly and unwholesome. Nearly every other industry has some means by which it is promoted—in lectures, in the press, by other mediums of expression. The healthfulness, the nutritious quality or the other desirable qualities of different food products are much exploited. The contrary, however, has frequently been the case with dairy products. We should all unite—individually through our associations and dairy papers—to extol, as we well and truthfully may, the healthfulness, the nutrition, the economy and the general desirability of the use of dairy foods. In this way a renewed confidence will be established, and renewed attention to these articles will be attracted and their consumption very largely increased, not only to the advantage of our own industry, but to the healthfulness and economy of our whole people.

**DAIRY IMPROVEMENT.**—A greater effort should be made toward improving the quality of our dairy product. In some particulars we are making satisfactory progress in this direction. The science of butter making under California conditions is becoming better understood and more generally applied. At the State Fair twenty-six samples of fresh butter were shown and scored by experienced and qualified judges. This butter came from the cool coast counties and the hot valleys of the interior; from the high grass lands of the mountains and the low alfalfa fields of the plains. Through the use of aerators, separators, refrigerators and other agencies within the control of the butter maker a remarkable evenness of product resulted. This exhibit is most instructive and desirable, and it is to be hoped that the butter makers of the State will continue in increased numbers to exhibit their manufactures, and to study each other's methods, that the better practices may survive and the unwise ones be discontinued and a general improvement follow.

**DAIRY STOCK.**—The one particular in which our people do not seem to be making proper progress is the introduction and breeding of special purpose cattle, or the cattle of the distinctively dairy breeds. The last report of the State Dairy Bureau shows that of over 309,000 dairy cattle in California only a little over 11,000 were either pure breed or grades of the better breeds. While these figures may be quite inaccurate, any one familiar with the State and with the character of cattle used by our dairymen can testify that a grade of cattle very much inferior to what might readily be bred or procured are most generally used. This is wasteful and retrogressive, and is not up to the standard and practice of the average California farmer in other particulars. In the few years during which California has been a State we have taken first rank in the varieties of fruit trees grown by us, of oranges, of raisins, of hops, and of harness and running horses. The one particular in which our farmers have been markedly backward has been the general introduction of a high class of dairy cattle. The improvement should be promoted by the management of the various creameries, who should use every effort to induce their patrons to improve the character of the dairy animals used by them, and to feed and care for them in the most approved manner. The result of this would be increased prosperity on the part of the patron and an improved product by the factory.

**DAIRY INSPECTION.**—A further improvement in our dairy methods which would be of incalculable value to the industry in this State which could be brought about by the active efforts of an enterprising factory management would be the devising of some means whereby each of their patrons should be under the watchful surveillance of some competent employe of the factory, and whereby they could be instructed in the most approved, modern dairy methods. System, cleanliness and profit could thus be inculcated in the most direct manner possible. The home of every patron might well be visited, his cows examined, his manner of feeding and breeding them inquired into, and his mistakes and errors pointed out. It should be required that his milk be drawn from large-



yielding, healthy cows, fed on wholesome food, and that the milk be so handled that it be delivered sweet and clean and wholly free from contamination to the factory. The creamery management which adopts this policy will have a prosperous and happy class of patrons, and will get milk from which the most superior cheese or butter should be made.

**DAIRY ASSEMBLIES.**—I regret the small attendance at this convention. Meetings of this character could be made the means of great improvement to the dairy industry and of advantage to dairymen and breeders of dairy cattle. I hope that a special effort will be made during the ensuing year by our new officers and the members of our association to promote an increased attendance at our next meeting. A great work remains to be done by California dairymen. We are the custodians of a great industry. California is comparatively a new State, yet in many departments of her progress she has already far surpassed her older sisters. She stands in the very van of progress in mining, horticulture and viticulture, in the growing of raisins and hops and sugar beets, and in the breeding of harness and running horses. What our brothers have done in these fields of effort we can do in ours, and I predict that in the near future our dairy farms will be stocked with fine-bred dairy cows and will be managed by competent dairymen. When our dairy products shall have attained to a standard worthy of our State I hope it will be found that this association will have borne well its part in promoting that development.

Dairy Herd Tests at the Pan-American.

All dairymen will be interested in the following report of the model dairy at the the Pan-American Exposition, giving totals of each herd complete from the commencement of the test—May 1—up to and including the week ending August 27, 1901:

Profit.....	163.98	157.07	154.46	143.17	132.30	130.24	121.19	130.09	121.03	79.93
Total cost of feed.	90.82	80.70	91.83	104.50	92.40	99.16	76.90	105.81	71.99	86.13
Value of grain fed.	55.74	56.85	56.81	66.27	58.45	58.89	46.18	66.96	39.99	54.59
Value of silage fed.	14.20	13.27	13.75	16.16	13.40	12.50	13.82	16.05	9.72	10.81
Value of hay fed..	23.88	18.58	21.27	21.98	20.55	27.77	16.90	22.30	22.28	19.75
Value at 25c. per pound.....	254.80	245.77	246.09	247.67	234.90	229.40	199.09	225.90	193.02	166.06
Amount of butter.	1019.25	983.14	984.38	990.71	939.60	917.64	792.35	903.63	772.12	664.29
Pounds of milk...	19,565.9	18,945.7	23,223.1	26,765.3	20,679.0	22,127.6	17,686.3	22,478.8	14,468.8	17,063.1
NAME OF HERD.	Guernsey.....	Jersey.....	Ayrshire.....	Holstein.....	Red Poll.....	Brown Swiss.....	French Canadian.	Shorthorn.....	Polled Jersey.....	Dutch Belted.....

Some criticism has been expressed because the report supplied officially by the Exposition does not take into account the value of the skimmed milk. Skimmed milk doubtless has a value, and the herd that gives the largest amount of milk would naturally have the largest amount of skimmed milk to its credit; but against this should be charged the labor of handling, feeding, or otherwise manipulating the same. As there are no prizes offered for skim milk alone, there has been no competition on account of it, and the records have not been encumbered with the additional figures because of the confusion that it would lead to. The figures given, however, set forth the total milk as well as the butter. As a matter of fact, the value of skim milk is of wide variation. Some judicious feeders value it as high as 15 cents per hundred pounds. Commercially, the price of 10 cents a hundred might be considered a fair valuation.

THE POULTRY YARD.

Great Flight of Homing Pigeons at the Pan-American.

**TO THE EDITOR:**—One of the more impressive Exposition features of September 5 was the flight of the homing or messenger pigeons. These beautiful birds to the number of 7000 were gathered from different

homing pigeon sections throughout Ontario, New York and surrounding States. Local homing pigeon fanciers belonging to the National Federation of American Homing Pigeon Fanciers and the National Association of American Homing Pigeon Fanciers had this feature of the exercises in charge, to whom much of the credit for the success of former Exposition flights is due. These flights were among the largest ever attempted in this country.

Pigeons from the different sections were housed in specially constructed cages until the auspicious moment for their release. When the final signal was given men officially appointed by the federation simultaneously lifted the covers from the cages, thereby instantaneously releasing every bird. What followed will linger in the memories of the thousands of those present for years to come. From a confused mass of struggling, promiscuous wings and feathers a great cloud of bird life gradually formed over the Exposition grounds at a height of some 600 feet.

**HOW THEY FLY.**—The peculiarity of homing pigeon flight lies in the fact that they circle in four directions, returning from each circle to the central point directly over the cage from which they were released. These circles take the form of a double figure eight, crossed at the central portion. Some pigeons apparently gain their bearings by making two or three turns, while others circle about for some minutes. Their method of starting also varies, some flying off at a tangent from their circular course, while others stop and turn abruptly to the right or left and make a bee line for their home loft from that point. Each of these birds carried a message to the Governor of their home State or the Mayor of the city or town whence they came.

**CARRIER AND HOMING PIGEONS.**—The public is not generally cognizant of the fact that there is a distinct difference between a carrier and a homing pigeon, the one a typical carrier pigeon that could not find its way home at a distance greater than 1 or 2 miles, while the other represents the acme of homing instinct, a qualification that has proved a marvel to the ornithologist and the laity alike.

Carrier pigeons at one time possessed a homing instinct, though it is doubtful if it was ever thoroughly developed. Fancy breeders during recent years have succeeded in producing such an excessive eye wattle as to materially affect its flying powers, thereby indirectly destroying what homing proclivities it possessed. Its name is a misnomer, as it was never known to carry anything of its own free will, though as a cognomen to express a type with a history it is significant.

**THE FASTEST BIRD.**—Homing pigeons are receiving more attention every year, and some of the records recently made by the best of these birds are simply astonishing. Madison is the fastest pigeon that was ever timed over a 100-mile course. This bird is owned by William J. Lautz of Buffalo. The course over which it flew in making its wonderful record was laid from Girard, Pa., to Buffalo, the race being made on the 16th of May, 1900. Two hundred and eighty birds were flown on this occasion under the auspices of the National Federation of American Homing Pigeon Fanciers. The birds were released at 10 o'clock and at 11:09:54 Madison had covered the course and was in the loft of Mr. Lautz at Buffalo, thus making an average speed of 2511 yards, or about 1½ miles, per minute.

**LONG DISTANCE FLIGHTS.**—The greatest long distance flight ever successfully flown was from Denver, Colo., to Grafton, W. Va., on July 30, 1899, a distance of 1324 miles, which was covered by a homing pigeon which reached its home on August 29, thus requiring a month to make the journey. In this case the bird may have been captured and detained, or it may have become tired out and required some days to recuperate. The distance being so great, the wonder is that the bird reached home at all.

In rapid long distance bird communication the acme was reached on July 3 of last year in a race from Lawrenceburg, Tenn., to Buffalo, a distance of 700 miles, which was covered in thirteen hours, twelve minutes and forty-one seconds, being at the rate of 1546.97 yards per minute for the whole distance, which is a marvelous exhibition of homing instinct, physical endurance, speed and courage. At a meeting of fanciers in New York last winter this record was thoroughly discussed, and it was the general impression that the record is not likely to be beaten for many years, if, indeed, it is ever exceeded.

**USES OF PIGEONS.**—The use of homing pigeons in the United States has never commanded the interest or assumed the importance that it has in older countries. It is a royal sport and is devoid of any unnecessary hardship to the birds, as it is impossible for the owner to urge them along or to practice cruelties such as attach to almost any other sport when in the hands of the unscrupulous.

Large homing flights are often held in France, when as many as 5000 Belgian birds are released to fly for their homes in competition. About 2,000,000 homing pigeons are taken across the frontier from Belgium every year and engage in races by organized Belgian clubs. European governments have for a great many years experimented with a view to their usefulness in time of war, the wisdom of which has been demonstrated on different occasions. Dur-

ing the great siege of Paris in 1870-1 it is said that one bird carried 40,000 messages into the city. These messages were so small that it was necessary to enlarge them by photography before they could be read.

During the recent war in Africa the Boers used homing pigeons to advantage. General White at Ladysmith also had a loft, but the Boers had the best service.

The United States Navy Department has recognized the usefulness of the homing pigeon to a certain extent, as their experiment stations at Portsmouth, N. H., Boston, Newport, New London, Conn., Brooklyn, Philadelphia, Washington, Annapolis, Norfolk, Va., Port Royal, S. C., Key West and Pensacola, Fla., would indicate.

The managers of the Pan-American Exposition undertook to make the homing pigeon feature the most important event of the kind ever held in America.

Pigeons have been trained in the different homing districts throughout the country. These districts divide the country into small sections, and so complete is the classification that almost every part of the United States east of the Mississippi river is embraced in these sections. Des Moines, Ia., is one of the few districts west of the Mississippi that was represented. Pigeons from these different parts of the country were sent to the Exposition grounds some time before the day fixed for their release. When the day arrived the signal was given which simultaneously released a vast number of imprisoned pigeons and one of the most impressive sights in bird life ever witnessed took place. From the cages they immediately rose to a considerable height and circled about for some minutes, apparently gathering strength and confidence, and got their bearings preparatory to taking their departure for home. In a very short space of time they were radiating in every direction, with but one object in life, that of gaining the home cote that contained the affectionate little mate.

Some of the pigeons had a journey before them of a few hours, some required a whole day in flight, while others did not reach home for two, three or more days.

H. S.  
Buffalo, N. Y.

Domesticating Quail.

M. G. Jenison writes entertainingly for the Mayflower about the California quail and its life history: It was under the orange trees in the "Land of Sunshine" that Mr. Quail first met his mate, Miss Trim, and so ardent a lover was he from the very first that I was not surprised a little later to know that he had become her husband and to see them out together hunting for a desirable building site. The one finally selected was under a cypress hedge and so well concealed by it that they were protected from many of their enemies, while the casual observer would pass without once thinking what was concealed there.

This home nest was quite well constructed though not so very large, but large enough, however, to contain eighteen eggs which good Mrs. Quail managed to cover successfully and to handle in such a way that they would all get the required warmth. During all the preparatory and incubation periods Mr. Quail proved himself to be a most devoted and watchful husband. Each day he would go with her out walking for refreshment and exercise and a pretty couple they were.

Whenever a desirable feeding ground was reached he would mount a high point near and keep watch while she satisfied her hunger. There he would stand with his bright plumage glistening in the sunlight and his delicate crest raised over his head, and nothing appeared to escape his notice, while all the time he was keeping up a conversation with his attractive mate.

Our yard they considered to be a safe neighborhood, for early every day they would come through the garden and over the flower beds, frequently going but a few feet from where I chanced to be, for birds quickly recognize their friends. However, let anything strange appear, especially if it indicates danger, and how quickly this valiant watchman would change his voice, which was at once heeded by Mrs. Quail, who waited until she was assured she could proceed. Or if there was a note of urgent alarm there would be a sudden whirr and off they would go to a place of safety.

I became much interested in the daily visits of my friends, so was a little anxious when I missed them for a few days, but the cause was explained by going down in the orchard near their home where I discovered the happy couple closely followed by eighteen little brown balls of down that appeared to be brimful of activity. When I appeared Mr. Quail gave his note of alarm and the mother, calling her children, quickly disappeared under the hedge—and how suddenly they can vanish from one's view is surprising. But as I remained quiet and they discovered that no harm was intended I soon had the pleasure of seeing them come out of their places of concealment, and with the old birds' watchful care they scrambled about for some time, when the mother called them under cover and properly put them to rest.

It was not many days before the happy family



could be seen every morning out for their regular trips through the fields, returning home at the first indication of the shades of evening. The children grew rapidly and it was not a great while before they appeared in new suits patterned after those worn by the parents, and so rapid was their development that after a few weeks the parents and children appeared much alike and were able to take to wing when occasion required.

With snakes, hawks, owls, coyotes, etcetera, the existence of all the Quail family is quite uncertain from beginning to end, but our particular little band appeared to escape them all. They would frequently come about the house and garden work, comparatively fearless of all mankind until the opening of the hunting season, a few days of which changed their whole manner, the effects of the deadly gun making them suspicious of all humanity, and instead of coming near the house they would quickly hurry off to distant and more secluded feeding grounds.

Their return in the evening was much later and often they would not get in until the sun had disappeared beneath the horizon, and instead of their fearless manner every move now indicated an expectation of danger. They would keep more among the high bushes and weeds and work quietly homewards until near the orchard, when there would be a sudden whirr and the covey would all vanish among the branches, when, after a brief conversation, evidently congratulatory upon their safe return, all would be quiet.

Their caution and shyness increased as the season went on and every effort at a renewal of our previous friendship was regarded with suspicion; and I did not wonder much, for I noticed that their number was growing gradually less as one after another was carried off in some sportsman's gamebag, and when the new year dawned there were only a few remaining to make New Year's calls on their cousins upon the mesa, where they could discuss in bird language the important question as to whether man expected to protect them by proper legislation, or to permit practical extermination, as has been the fate of so many of their acquaintances wearing feathers or fur, with affection and thoughts of their own, but the inability to properly guard themselves against the superior intelligence and destructiveness of mankind.

## HORTICULTURE.

### Some Semitropical Fruits.

By C. P. TART of Orange at the University Farmers' Institute at Villa Park.

It has long seemed to me, and time but strengthens the opinion, that people of Villa Park and others who dwell on that belt of mesa land which extends, with a few breaks, from Santa Ana on the south nearly to Santa Monica on the north, are not fully aware of the advantages pertaining to their location. Here we have a narrow but fairly well watered strip of land which is virtually frostless during the entire year. On it, in many places, tender plants live from year to year: plants which even one or two degrees of frost usually cut to the ground. There are very few such spots in the United States, and compared with the total area of the country they are quite insignificant, but yet they are capable of producing much that is unique and very profitable. This is a semitropical region, and it is the purpose of this paper to call attention to some semitropical fruits which either have proved a success here or which are eminently worthy of trial because of their behavior in similar situations in other regions.

**THE LOQUAT.**—Naturally first, because we have proved it longer, comes the loquat, to which I shall allude but briefly. Ten years ago it was not considered of much market value and was raised chiefly as an ornamental. Now, as a result of careful selection and budding, such an improvement has been made in the quality and size of the fruit that considerable attention is being paid to it for commercial purposes. The demand has increased faster than the supply, and Los Angeles alone will take at high prices all the first-class ripe fruit likely to be raised for years, and all the other large cities in the United States will be calling for it in time. Loquats sell well in San Francisco at the present time, and I have shipped to New York and received good prices. This region is as well adapted to this fruit as any in the world—a fact which should be taken advantage of. To be sure we have lately found that the loquat, which seemed to be almost without an enemy, is subject to the pear blight, but while we will undoubtedly suffer from it some each year, I do not yet believe that it will be fatal to the industry, for by care and watchfulness and diligent use of the pruning knife the grower will be able to keep the disease within bounds.

**ANONA CHERIMOLIA.**—Prof. Wickson, in his "California Fruits and How to Grow Them," says: "This fruit was introduced about thirty-seven years ago and the parent tree has for many years produced abundant fruit. Good specimens are 3 or 4 inches in diameter, often heart shaped, and greyish brown or

nearly black when fully ripe. The pulp is of the consistency of custard flavored with a blending of pineapples and bananas. Apparently it has no particular season for ripening, yet the best specimens seem to be found in April and May."

It is grown on a small scale in this vicinity and lately considerable attention has been drawn to it. The trees best known are those of Mr. Burge, near the church at Villa Park, which have borne well and proved enormously profitable. It seems that these trees are somewhat exceptional and have better bearing qualities than others I am acquainted with. This shyness in bearing need constitute no difficulty in planting this fruit, for seedlings can be readily worked over by budding or grafting. There is a ready sale for the fruit at about \$3 per dozen for good specimens, and as the fruit ripens up well when picked green it can be safely shipped long distances. It is already known in the markets of large cities.

**THE AVOCADO.**—This fruit is variously called "ahuacate," "alligator pear," "midshipman's butter," etc. Botanically it is *persea gratissima*. I am sure it will do well with us, and I wish to draw your attention to it particularly, for from what I have read and seen I believe that it will succeed at least as well as the cherimoyer. Descriptions of this fruit by Prof. Wickson, Dr. Franceschi and Prof. Van Deman all agree in stating that it is most luxurious. From them I gather the following facts: Two trees were introduced into Santa Barbara in 1870. One has borne regularly and as many as 500 specimens at a time and the other not at all. This indicates that, as with other seedlings, there will be a great variation, and the remedy is, of course, grafting or budding to the best variety. The following, by Prof. Van Deman, is the latest description I have found. He is alluding to fruit on exhibition at the Pan-American Exposition from Florida:

This fruit, although frequently called the alligator pear, has no relation whatever to the pear family, nor does it belong to the alligator family either. It is grown upon trees fully as large as our pear or apple trees, and many of the varieties are about the shape of ordinary pears and vary in color from light green to pinkish, dull red and purple, some of them being almost as dark as to be called black. There is a large seed inside which is surrounded by a pulp or flesh which is about the consistency of ordinary butter and when slightly salted has a most delicious taste. Without salt it is a little insipid. It is commonly used for making salads in the tropics, and I know of nothing which is more enjoyable among the tropical fruits.

The tree is an evergreen. A few weeks ago I was directed to a yard in Los Angeles where there are as many as twenty trees, bearing considerable fruit. They are doing very well, considering that they are among the oil wells and what I should judge to be not very good soil. Like the cherimoyer, the fruit is already pretty well known in the markets of the large cities, where they are said to be worth \$3 or \$4 a dozen for the larger kinds. In Los Angeles they retail for 40 to 50 cents each.

**WHITE SAPOTA** (*Zapote blanco*: *casimiroa edulis*).—This fruit is grown and much esteemed in Mexico. In Santa Barbara there is one tree over seventy years old. Dr. Franceschi recommends the fruit as one of the most desirable and promising that we have. The tree is an evergreen and endures slight frosts unharmed. It grows to be quite large and is very ornamental. This spring I planted a number of these trees and they are doing very well indeed. While I would not advise any one to plant many, still those who have the interest of this locality at heart should at least try one or two.

**THE MANGO** (*Mangifera indica*).—This is another fine fruit which I hope to see introduced here. There are over 100 varieties of the mango and among them there are undoubtedly some which would succeed. Some are bearing in Santa Barbara. In speaking of this fruit Prof. Van Deman says:

In Florida the mango is grown in the vicinity of Lake Worth and Biscayne bay and to some extent on the west coast south of Tampa bay. There were beautiful specimens of the mango called Mulgobo, which is one I imported in 1889 from the East Indies, when I was in the Government service. One of those trees is now bearing abundantly, and some of the younger ones are just beginning to bear. Some of the specimens at the Pan-American weighed a pound each, and their perfume was simply delicious, to say nothing of their flavor. It is indeed one of the most delicious fruits in the world.

Dr. Franceschi says seedling mangos will bear when two or three years old if properly treated.

**THE GUAVA.**—The common red or strawberry guava is well known, and it is not of that that I desire to speak especially, for, while a fairly good fruit, it will never, I think, be deemed worthy of cultivation on a large scale. Among a number of varieties which I received from Florida, one has proved to be far ahead of anything else in line. It is about two or three times the size of the strawberry guava, has few and smaller seeds lying near the center of the fruit and an extraordinary thick flesh. The flavor surpasses anything of the kind I have ever seen and comes closely to the ideal. As it belongs to the class of which the well-known lemon guava is the type, I presume that it is tender and should be grown only in frostless regions such as we have here. I predict for it great popularity and that the public

will be willing to pay high prices for it when it becomes known.

**OTHER FRUITS.**—Better perhaps than the guava will be the Feijoa sellowiana, which Dr. Franceschi has lately introduced. It is said to somewhat resemble a guava, but will stand 10° of frost. It is said to taste like pineapples and bananas. In size it is 3 inches in length and 2 inches in diameter, and a good bearer. It is very popular in the south of France. At present the plants are difficult to obtain, but I understand a good start has been made and no doubt they can be had in abundance in a few years.

Then there is a litchi or Chinese cherry or raisin which would probably succeed: the cerimon or monstera deliciosa, which has done well in several places. The varieties of Eugénias, the grenadillas, are worthy of attention. The magnificent Japanese persimmons, Kachiya and Tane Nashi, are increasing in demand. Indeed, there is no lack of fruits from which to choose, and the number is constantly increasing.

## FRUIT MARKETING.

### Greek Currants.

Special Consular Report received from F. W. JACKSON, Consul at Patras, Greece, by the Pacific Commercial Museum of San Francisco.

My previous reports upon the Greek currant crop and its exportation, under the dates of June 14 and July 15, leave little to be added at this time. Despite the unfavorable weather which overtook this section during the vintage, the predictions as to the size of the crop will stand practically without change. The quality of the fruit, which promised to be of a very high order, was probably affected somewhat; but, from the latest information obtainable, the depreciation is less than was originally feared. The average opening price was a little in excess of 20 shillings per cwt. of 112 pounds in barrels, c. i. f. New York. Indications point to a rapid decline, however, and exporters are in no haste to accept the crops from the growers at present prices. The decision of the Currant Bank upon a retention of 12% of the crop was a compromise to meet the demands of the exporters for a retention of 15% and of the growers for one of 10%. Estimating the crop at about 140,000 tons, and deducting the 12% retention, there will be left for export about 123,000 tons.

Not a little discussion has reached me of a probable trust formation among the currant merchants of Greece. Such a monopoly is not feasible, primarily because the product is far more a luxury than a necessity. More than that, it is hardly probable that such a trust could be formed among the exporters at present, since the competition is very close, and it would be a gigantic task to control the countless growers scattered over the Mona and Ionian islands. At any rate, such a combination does not now exist. The only evidence of united effort to control prices which has come to light was the unsuccessful attempt by the growers in a small district to fix the prices of their stock for the exporters. This was, however, an internal affair altogether. It is probable that heavy shipments of currants will be made to the United States, but only of the medium grades, the best brands going to England.

### The Agricultural College.

TO THE EDITOR:—In a recent communication "Fidelio" takes occasion to laud the writer's article under the above title. He says in part: "The advice contained in your article to the PACIFIC RURAL PRESS of September 14th is not only well-timed, but sound. You strike the right note in recommending a special training in agriculture for young farmers. Expert work is everywhere in demand." Nothing is truer than that experts are in demand or else why do they command such high wages? This is true of agriculture as well as of every other industry or profession; no matter how knowledge was acquired it is always well paid for.

The farmers' reading courses appeal especially to those who cannot spare a son at college, and I trust that the next few years will put them into the prominent position they so well deserve.

I thank "Fidelio" for his kind missive and should be pleased to make a better acquaintance.

Lamanda, Cal.

ERNST DOLGE.

**NURSERY STOCK SCARCE.**—San Jose Herald: The nursery stock market this year is short in peach and apricot trees, and as a result these two varieties will command a high retail price. The heavy frosts of last spring killed large numbers of the little trees in the nurseries throughout this section of the State. While it is too early in the season by several months to plant these young trees, local nurserymen are ordering their winter stock, and it is probable that enough trees cannot be secured to supply the regular demand. Last year peach and apricot trees for planting retailed at from 20c to 25c apiece. This year the price will probably be the same, if not higher. The Burbank Sugar prune has given general satisfaction this summer, and is rapidly coming into demand. It is said to be a better drier than the French prune, giving a longer drying season, with less danger from the early rains. The few trees which were old enough this summer in this valley bore unusually well.



## Agricultural Review.

### ALAMEDA.

**RAISING WILLOWS FOR BASKETS.**—Oakland Tribune: D. Don De of Mendocino county has lately purchased a portion of the Stanton tract in Castro valley, near Haywards, where he intends planting osier willows, which he will use in the manufacture of willow baskets. He expects within a few years to have quite a willow basket factory on his place, which is a very desirable location for such an industry, as the ground is suited to the growth of willows.

### BUTTE.

**RIPE ORANGES.**—Oroville Register: September is very early for ripe oranges, but on Sunday last the writer paid Thermalito a visit, and at the home of Mr. Boswell he was shown an orange of this season that was fully ripe.

### COLUSA.

**LARGE WATERMELON.**—Colusa Sun: A great watermelon came from the patch of J. L. Davis of Sycamore as a representative of many more of the same ilk. The children put some seed carelessly out in a patch, and then the family went to Santa Cruz for the summer. Recently they returned to find the melons had taken care of themselves, spurned irrigation and done their own growing. The specimen measured 44 inches around and 52 lengthwise, being of a short, round variety.

### FRESNO.

**YELLOW JACKETS GALORE.**—Fresno Democrat: Converse Basin is infested by yellow jackets. They outnumber the ordinary house fly and outrival anything in the insect tribe for annoyance. They are particularly fond of fresh meat and make a raid on anything in that line that is accessible, and, if interrupted, they let you know that they do not tolerate interference.

**CHAMPION PEACH PICKER.**—Fresno Democrat: Charles E. Tolerton holds the championship at Kingsburg for picking peaches. He gathered 100 boxes in ten hours, making \$5 at 5 cents per box. One hundred boxes make up nearly four tons of fruit, and four tons is a large amount for one man to pick. He was picking for the cannery and had to be particular as to the size, whereas if he had been picking for cutting he would have made more.

### HUMBOLDT.

**CREAMERY PRICES.**—Arcata Union: The following prices were paid by the creameries in this vicinity on September 15: Arcata creameries 26 cents, Laursen 25½ cents, Premium Creamery Co. 25 cents, and Cauzza Bros. 25½ cents. The creameries in Eel river valley paid as follows: Abrahamsen 26 cents, Capitol 26 cents, Cold Brook, sixteen days, 25 cents, fifteen days, 27½ cents, Cold Spring 26 cents, Crown 26½ cents, Eel River 25½ cents, Excelsior, sixteen days, 25 cents, fifteen days, 27 cents, Ferndale 26 cents, Grizzly Bluff 25½ cents, Pioneer 26 cents, Riverside 26 cents, Silver Star, sixteen days 25 cents, fifteen days, 27 cents, Sunset 26 cents.

### KINGS.

**MAMMOTH MUSKMELON.**—Hanford Journal: I. P. Alcorn, one of the pioneer farmers of this county, brought in Monday a mammoth muskmelon, weighing thirty-six pounds. Mr. Alcorn picked another melon from the same vine, and at the same time, that weighed thirty pounds. The vine is growing on land that has not been manured or irrigated. On land that was manured Mr. Alcorn grew three years ago a muskmelon that weighed fifty-one pounds, but it was not good tasting. The land along Kings river, where these melons were grown, is particularly rich for the growth of vegetables.

### LOS ANGELES.

**A DUCK WITH A GOOD RECORD.**—Los Angeles Times: A duck typical of southern California, and showing the productiveness of the country, is owned by Mrs. Cole of 521 East Twenty-third street. Since October 1, 1900, being then five months old, the duck has laid 315 eggs.

**LARGE HEN EGG.**—Los Angeles Times: Charles Riegel exhibited Saturday an abnormally large hen's egg, inside of which was another perfectly formed egg with a hard shell. The inside egg was almost as large as the average egg. The double egg was laid by one of Mr. Riegel's hens.

### MONTEREY.

**GRAIN BURNED.**—Salinas Index: Twenty-one hundred acres of wheat on the Luther part of the Peach Tree grant were burned a few days ago—seven settings and the rest of it standing grain. Mr. Thompson also had 160 acres of wheat destroyed by fire.

**BEEF SLICING.**—Salinas Index: The

Spreckels beet sugar factory is just getting well started and is not yet running to its full capacity. About 250 men are at work, and the big mill will soon be running in full blast. Beets are coming in lively. The refinery, erected since the factory was shut down last season, is now in operation turning out white sugar.

### MERCED.

**BIG MERINO FLEECES.**—Merced Star: Some time ago A. J. Ostrander purchased a number of imported French Merino rams from Glide's stock farm in Sacramento. They were sheared recently and each sheep produced a fleece that weighed 134 pounds.

### NAPA.

**GRAPES SELLING HIGH.**—St. Helena Sentinel: The price to be paid for grapes, as given out by the California Wine Association last week, precipitated a flutter among winemakers and growers. The price—\$24 per ton—has been raised by outside winemakers, and prices ranging as high as \$26 per ton have been paid. It has been predicted that growers will receive as high as \$28 a ton in some cases, but sales now being made are on the basis of \$26—\$2 above the price fixed at Grey-stone.

### SACRAMENTO.

**SUCCESSFUL TOBACCO GROWER.**—Record-Union: Sebastian Hamberger, who lives 3 miles up the river, near Bryte's Landing, is devoting his attention to tobacco culture. He says his product is popular with those who use it, and he believes the industry could be made largely remunerative if farmers of the Sacramento valley could go into the business on a scale sufficiently large to afford a market supply for cigarmakers. This year Mr. Hamberger has 400 plants that are thriving well. He has been growing tobacco for seven years and has never had a failure of crop.

### SAN BERNARDINO.

**THE RUSSIAN THISTLE.**—San Bernardino Sun: The Russian thistle has been discovered in another part of the valley, this time here in the city. It will be remembered that S. B. Parrish, himself something of an authority on botany, recently reported that he had discovered some of the pestiferous weeds east of the city. Last week W. R. Wright, another local student of botany, brought to this office a sprig of thistle which he had pulled from the lot at the corner of Sixth and F streets, where the ground is thick with it, as is also the vacant lot a block farther north, at Seventh and F streets. The weed is just now maturing and the fine seeds, which are produced most wonderfully multiplied, shake out of the tiny axils along the stem, and the next north wind will scatter them all over that part of town. Mr. Wright suggests that the city authorities ought to see to it immediately that the lots are cleaned and the weeds burned, thus getting as much as possible the start of the pest.

### SAN DIEGO.

**NO DEMAND FOR LEMONS.**—San Diego Union: Most of the lemon packers have shut up shop and gone visiting. They are doing nothing much except watch the market, in the hope for a little spurt of business that will take care of the lemons already bought and in prime condition for shipment. "The truth is," said one of the packers, "the big drive we had a while ago ruined things. There was a vast amount of speculation in lemons. Eastern buyers bought incalculable lots, many of the buyers being men who had hitherto bought in small quantities. Lemons were high and they believed that they were going to be higher, and so they pitched in and bought. Then the demand went down and some of these fellows have now more lemons than they wish they had. They have lemons which cost them over 3 cents a pound, while lemons are now a drug on the market at less than half that price. Naturally they want to work off the old high-priced stock before they buy any more. During the recent drive we were paying as high as 3 cents for lemons. There was good money in lemons at that price for any grower. At this time some of the packers are not buying lemons at any figure. The going price is from ¾ to 1 cent a pound, and we expect a pretty good article of lemon when we pay 1 cent. There is little margin for the shipper at to-day's prices, and no money in it for the grower."

### SAN JOAQUIN.

**MACARONI WHEAT.**—Stockton Mail: The planting of macaroni wheat is being agitated. This wheat brings \$1.15 a hundred in Stockton at the present time, while shipping wheat is selling here for only 92½c and the best milling at 97½c. Of course, with a higher market for the ordinary varieties, macaroni wheat would command a correspondingly higher price. Peter Musto, of this city, is the proprietor of the first macaroni factory established

in California, outside of San Francisco. In former years wheat for the making of macaroni had to be imported from the region of the Black Sea, and even now Mr. Musto has to get his wheat from the State of Washington. He is of the opinion that it will grow anywhere in this section, and is quite sure it will thrive in the foothills. It takes certain elements out of the soil which are found in but very small quantities in other varieties of wheat, and Mr. Musto thinks that it may do better here than the other varieties. In time, however, a change of crop would be necessary. Formerly the best macaroni wheat came from Pataha City, Washington, but now the soil there is exhausted of the gluten-making principles and the raising of that kind of wheat has ceased. The fact that the macaroni variety will do well in this region has already been demonstrated, accidentally. About seven years ago a San Francisco manufacturer came upon 2000 bags of macaroni wheat on the Stockton water-front, which he bought immediately. It came from the West Side, and the farmer who planted it was ignorant of its value, as were also the local millmen and dealers.

**GOOD SALE OF TOKAY GRAPES.**—Lodi Sentinel: The Earl Fruit Company sold a car of Lodi Tokay grapes in New York Tuesday which realized for their agent, A. L. Chappell, \$1.60 to \$2.30, or an average of \$2.19 per crate.

**ISLAND FARMERS BECOME STOCKMEN.**—Lodi Sentinel: Haggin & Carr, the large land owners of Staten Island, are changing their farming land into a single stock farm in order to raise and fatten cattle for the San Francisco markets. Two large barns, 360 feet long by 60 feet wide, are already contracted for, as are also five dwelling houses for the cattlemen and their families. An immense hay warehouse will be constructed later.

### SAN LUIS OBISPO.

**GRAIN FIRE.**—San Luis Obispo Tribune: A disastrous grain fire occurred near Los Olivos Thursday morning. Two hundred and fifty acres of grain were destroyed, also 200 sacks of threshed barley and a feed wagon of the threshing outfit belonging to McMurray of Santa Ynez. The grain destroyed was grown on land rented by a couple of Portuguese named Martin and Fratis. The fire started from the engine.

### SANTA CLARA.

**GRAPES \$29 A TON.**—San Jose Mercury, Sept. 23: The price of wine grapes is still soaring. The \$25-a-ton quotation established by the Wine Growers' Association is not the limit the growers are receiving, by any means. Contracts are closing at \$29, and in more than one instance this figure has been exceeded. As the season advances the conditions improve for the producer. With the announcement some time ago in certain interested newspapers that there was danger of an influx of cheap wine from France, buying interests sought to fix a rate of from \$22 50 to \$25. The circulation of the report of the "French invasion" was of course a lull move in the interest of the Association. The "French invasion" canard served its purpose, however. It called the attention of growers to the great conditions and they were not slow to appreciate. Independent buying interests refused to make common cause with the Association, and sought to close contracts at \$25 a ton before that body made public its intentions. There was an immediate change of heart among growers. With increased confidence they were willing to hold back for all possible advance in price. The wisdom of this action is now apparent. While the Association has not fixed a flat price, it is willingly paying \$25 a ton. Independent buyers, to prevent being shut out, are offering more. No flat rate is in operation, but with the closing of a contract at \$29 a ton for the yield of one of the largest vineyards in the southern part of the county on Saturday last, the wine grape industry may be said to be in a very prosperous condition. No such figure as this has been reached in over twenty-one years.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian: The shipping rush of Bellefleurs is on. A large proportion of the stock being moved is intended for cold storage. Some of the Bellefleur orchards have been picked clean of fruit. It is feared that there has been too much haste on the part of packers in the case of some orchards. There has been a heavy influx of laborers in search of work in orchards and packing houses. The supply of labor is far better than was expected early in the season. The diabrotica has done serious work in some Bellefleur orchards in the eastern part of the valley. It bites a hole out of the blossom end of the apple, and this hole soon becomes the center of a rot. The diabrotica is a pest which needs an effective parasite.

### SONOMA.

**WINERY NOTES.**—Sonoma County Farmer: The sun has put sugar in the grapes rapidly the past ten days, some testing as high as 23% last week. While some grapes have been sold at from \$20 to \$22 per ton, a wine man said at Santa Rosa Saturday that good grapes were worth \$23 with the raise. There is plenty of empty cooperage for the crop, which will probably not exceed 70% for the county. The standing price for picking is \$1 per ton, or \$1.50 per day, without board. Hot weather is rushing the hops and the grapes at the same time, so that grape pickers are in demand, one grower offering \$1.35 per ton for a few good men. The Wine Association is paying \$24 for grapes in Napa county.

### STANISLAUS.

**BIG LEASE PROPOSITION.**—Modesto Herald: It is understood that H. Hughson and N. L. Tomlinson have about agreed on a proposition involving the lease by the latter of the entire Hughson ranch, in Turlock irrigation district, comprising 3360 acres. A five-year lease is proposed, subject to sale of the land at any time. Mr. Tomlinson, like Mr. Hughson, is an extensive and successful farmer, and with the Hughson and his own land he would be farming on a more extensive scale than any other individual in the county.

### SUTTER.

**BEATS RAISING WHEAT.**—Sutter Farmer: L. T. Stearns, who owns a farm about 7 miles northwest of this place, has a small orchard thereon, among which are a few almond trees. This year from the thirteen trees he picked 871 pounds of nuts, an average of sixty-seven pounds per tree. Some of the trees produced as high as eighty-seven pounds, but the average of the whole number was as given above. The nuts were of the Rouliers variety, and are quoted at 9 cents per pound. This gives a gross yield of \$87.39 for the thirteen trees, or counting 100 trees to the acre, at the rate of \$603 per acre.

**AMONG THE DRY YARDS.**—Sutter County Farmer: The rush of the fruit season is now over and the prunes are being cured in the various yards and orchards. The crop is light and the fruit of good quality. A prominent orchardist estimates the crop in this vicinity at forty-five carloads. The seedless raisins have been cured, but the crop was very light. The Muscatels are drying well and will be about an average crop. Most of the almond men have their crop in the sack, and figs are coming in quite freely to the packing house.

### TEHAMA.

**TO INSPECT OLIVE TREES.**—Red Bluff People's Cause, Sept. 21: R. W. Coats went to Corning to-day to inspect some of the olive trees there, which seem to be troubled with some kind of a parasite. The trees last spring were damaged to some extent by the grasshoppers destroying their foliage. Mr. Coats has procured from the Agricultural Department a fungus for the killing of grasshoppers, but says that it is dangerous to use it in a country where fowls are raised.

### TULARE.

**DATE PALM SUCCESSFULLY GROWN.**—Visalia Times: William Bowen, who resides on Goshen avenue, has growing in his dooryard a date palm which is now fruiting. The fruit grows in bunches, and one bunch on his palm is 14 to 16 inches across. It is a curiosity to those who have never seen dates growing. Mrs. Bowen planted the seed of this palm in 1888.

**SELLING GRAPES.**—Tulare Register: A good many Tulare vineyardists are selling their raisin grapes on the vines, so we hear, to representatives of J. K. Armsby on a basis of 3½ cents per pound in the sweat box. That is, the Chinese, who are the putative buyers, are to be paid that for their raisins, the growers getting somewhat less than that basis for the cured fruit. Picking grapes is now under way at the Paige ranch, but that entire crop has been sold to the Stockton winery.

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## THE HOME CIRCLE.

## The Hammock.

Consider now the hammock, how it lurk-eth like a snare  
To grab the unsuspecting man and throw him in the air.  
Yes, verily, the hammock hath a look of innocence, but it may take the strongest man and throw him to the fence.  
The hammock hangeth to the trees with meek and humble look,  
And tempteth foolish man until he cometh with a book,  
And climbeth in and stretcheth out and openeth the page,  
And then the wicked hammock getteth up its fiercest rage.  
It turneth like a serpent, and it taketh such a clutch  
Upon the feeble victim that he gaspeth very much.  
It whirlteth him about the air and swingteth him around, and when he opens his eyes again he's lammed upon the ground.  
Oh, surely, surely, this is so, yet over him the while  
The hammock swayeth quietly and seemteth then to smile,  
But yet again the man doth get within the hammock there, and thinketh he will read the book and banish all dull care,  
And then again the hammock jumps before a page he's read,  
And ere he knoweth what is up he standteth on his head.  
Yea, verily, and then again a hammock in the shade  
Will cunningly exert itself and lure a foolish maid  
To seek to rest within its folds, and when she sitteth in  
The hammock it will almost seem to wear a happy grin.  
It seizeth on the maiden fair and chuckleth at her shriek,  
And landeth her upon her neck before she tries to speak;  
She spraineth both her dainty wrists and moaneth "Oh, alas!"  
And findeth that her pompadour is clutched up with grass.  
And all the while the hammock sways with truly pleasant pall,  
And seemteth to inquire of her "Good sakes! Did some one fall?"  
Oh, yes, my son, and on a time when Cupid holds his sway  
And some enamored youth comes round to learn the happy day,  
'Tis then the hammock acteth worst, for it will hold the twain  
Until impassioned murmurs mark the courtship of the swain,  
And then the hammock taketh them and in the air doth hump  
And giveth both their foolish heads a most terrific bump,  
And slingeth them about the place until it getteth tired,  
And when it weariteth at last across the yard they're fired;  
The man descendeth in a heap upon the garden walk,  
The maid hath hairpins in her eyes, and is too mad to talk;  
And then the wicked hammock waits in most unholy glee  
To hear the racket that it knows is very sure to be;  
For when the maid regains her breath she riseth to her feet  
And voweth that the man himself is full of all deceit,  
And that he pulled it down himself and that she never more  
Will see his face, and wisheth that he'd gone an hour before,  
And that she'll never, never, be his bonnie blushing bride,  
And so he getteth to his feet and far away doth ride.  
My son, beware the hammock when it swings itself aright,  
For it can make the proudest man a truly humble sight.

—Baltimore American.

## On Her Own Responsibility.

"Two tens, four fives, five ones, and five dollars in change. Thirty in the envelope, fifteen in the pocket-book, and five in my purse. Five cents for car fare; round trip ticket, one dollar ten. That leaves three eighty-five in the purse."

It was extremely difficult for her not to give expression to her happiness by a dance down the car aisle. But she sat demurely enough in the last seat in the car, and set down her accounts in a small blankbook, with a hand which trembled only a very little with excitement.

At one of the suburban stations of

the great city a bright eyed young fellow with a strapful of schoolbooks came aboard the train, and at once espying his cousin dropped into the seat beside her with a hearty greeting of surprise and pleasure.

"This is luck!" he said, glancing approvingly at the trim figure in blue serge, with a sailor hat set atop of abundant smooth braids or fair hair. "Going in for the day? Where's Aunt Esther?"

"I'm all alone, Stuart," explained the girl. "I'm going shopping."

"Good; then you are in for the day. Say, Amy, want to see the game this afternoon? You can get your errands done in time if you hurry. It's going to be a good one, our team against the Leonard Preparatory boys, you know. I'm full-back myself, and have to play, but I can get you a seat and see that you have some nice people to chum with."

"Why, I'd like to go ever so much," said Amy, "but," doubtfully, "I'm afraid I shan't get through in time. You see, I've lots to do."

"What, for instance, if you don't mind telling?" asked Stuart, wondering within himself, for he knew the very limited means usually at the command of any member of his uncle's family.

"I'm going away to school, and, perhaps, next year to college," began Amy, unable to keep the great secret back another moment.

"The dickens you are! Good for you!"

"Yes, it's decided at last. And you see, mother isn't well, and I've all my things to get myself. It's a great responsibility," she added, laughing happily, "for," in a whisper, "I never had so much money to spend in my life before. I've fifty dollars," she could not help telling him, in answer to the unasked question in her cousin's face.

"Well, that is a lot," he said, politely, although his mental comment was, "I'll wager my sisters spend that on candy and flowers every winter. Where do you go first?" he asked, with interest.

"Mother like Williams & McIntyre's," said Amy. "But don't you think Collingwood has the nicest things?"

"Collingwood is bang-up," admitted Stuart, "but the girls say he's expensive. Those 'exclusive styles' people usually are. Ever try Dearborn's on Wachusett street? We fellows all go there for neckties and golf stockings, we think it's a third cheaper, and I can't see but their stuff is as good as Woodruff & Carleton's, the swell furnisiers. You might look in there."

"I will," promised Amy, "for I want to use every cent to advantage."

"You won't forget the game," urged Stuart, as they left the train. "I'll meet you at Stannard's drug store at 2 o'clock, but I can't wait much if you're not on time, you know. Don't miss it. Let a few flumydiddles go and keep your date with me, if you want to see us do up the Leon. Preps, in great shape. Oh, we won't do a thing to them—oh no! Well, so long, Amy. Two, sharp, remember."

Amy knew the best shopping district of the city fairly well, and decided to take a route that would allow her to pass all the most attractive shops on her way to Wachusett street. She walked rapidly until she came to Collingwood's, but there, in spite of herself, she paused. The fascination of the great windows, filled by the most accomplished window dresser in the city, was too great to be withstood.

"There's no harm at all in looking here," she said to herself. "Indeed, it's a good plan; for if I should find just what I want, I might be able to duplicate it at some cheaper place," a delightful fallacy, by the way, which has been the undoing of many an old shopper. She looked at her list. "Mother said I ought to get the street gown first," she murmured. "But oh, those lovely things for evening! And she admitted I must have at least a pretty waist to wear with my old blue silk skirt. How I would like a whole dress of that thin stuff! We could make it up over the blue—I don't believe it would cost much more."

"Three dollars a yard, miss," said

the saleswoman, as Amy pointed to a filmy, pale blue fabric dotted with white silk sprigs, and Amy slipped away as fast as possible. "I won't even look at evening materials," she assured herself, "until I have decided on the thick gown. I must remember how father and mother have denied themselves to give me this outfit. I'll shut my eyes as I go past the silks and organdies."

But she could not do this literally, and the seductive display in the next aisle simply flaunted its daintiness and charming color at her as she passed. She turned her head ever so lightly, and was lost. Draped most artistically over a crush of delicate blue silk was the sheerest of white organdies, with little wreaths of blue forget-me-nots scattered between silvery stripes. As if they could not help it, Amy's feet turned aside from the path toward the woollen suitings.

"Eighty-five cents," said the saleswoman, as Amy hung over the exquisite material. "It's a perfect thing, and one of our exclusive styles—you won't find it anywhere else. The pattern isn't even duplicated in any other background. Now this rose pattern, as you see, we have in green, pink, white and blue, but the forget-me-not only in the white. It's very choice."

"How much a yard did you say?" asked Amy, feeling as if she could never turn away from the counter, yet saying to herself that she must be gone.

"Twelve seventy-five the pattern, miss, 15 yards. You need that now for a dress, we don't sell less. It should be made up with the ruffles, you see," he handed her a fashion plate, "each ruffle edged with the blue velvet ribbon. I'll show you." And before Amy could protest he had sent a messenger to the ribbon counter, and had thrown several yards of narrow velvet of the forget-me-not blue upon the folds of the organdie. The combination was most effective. Amy's heart began to beat very rapidly.

"I couldn't afford the ribbon, for it would take dozens of yards," she calculated, rapidly, "but—oh, of course I can't buy it—"

An elegantly gowned woman, accompanied by a young daughter, came suddenly to the counter beside Amy. "O mamma!" cried the girl, "did you ever see anything so swell and so sweet as that forget-me-not stuff? Do get that!"

Another salesman stepped up and threw the dainty folds into a new position. "Twelve seventy-five the pattern, Mrs. Goodale," he said, impressively. "Exquisite thing, one of Mallard's, you know his. Our man got the exclusive sale of it, it's not to be duplicated anywhere. Nothing could be better suited to your daughter's style."

The daughter had fair hair and long-lashed blue eyes. So had Amy. Amy looked at the salesman. He was smiling significantly, without looking at her. Amy's cheeks flushed, and "Mrs. Goodale" had laid a possessive hand upon the organdie. Amy spoke quickly, in a low tone. "I think I will take it," she said.

But once outside. "I've been a goose already," she thought, ruefully. "That dress is a dear, but I know mother will say I couldn't afford it. She thinks it is vulgar to have a girl's party things elaborate while her every-day clothes are shabby. Well, it can't be helped now, and I'm not sure that I want to help it. But, Amy Brentwood, do keep a grip on your pocket-book for the rest of the day."

It was a most resolute and practical young shopper who sat down before the Dearborn display of winter dress goods. Being now on strict economy bent, to atone for the purchase of the organdie, she was in danger of attempting to suit herself with goods of too little durability and worth. Fortunately the man at this counter chanced to be an honest old Scotsman with daughters of his own, and when he detected the anxiety in the flushed young face, he set himself to help his customer secure the best possible value for her money. He won her confidence, and she accepted his judgment thankfully so the dress was soon satisfactorily disposed of and

Amy's purse was about \$7 the lighter.

The finding of a coat to be worn harmoniously with the dress took longer, and when after searching through many "cloak departments," Amy finally paid \$11 for the only thing she thought would do at all, she was thoroughly weary. Time was flying fast, and if she kept her appointment with Stuart she must not stop for lunch. So she ordered a cup of hot chocolate in a confectioner's shop, and while she waited for it made up her accounts. They stood thus:

Street car and round trip ticket....	\$ 1.15
Organdie.....	12.75
Cloth dress.....	7.00
Coat.....	11.00
Chocolate.....	.10
	<hr/> \$32.00

This left a balance of \$18. Amy's courage rose. "I believe I am redeeming myself," she thought. She went about her smaller purchase cheerfully, buying a pair of heavy walking shoes at \$2, and two pairs of 40-cent stockings, with a most virtuous sense of being a wise and careful shopper. Still these expenditures reduced her balance to \$15.20 and she groaned in spirit again.

"How it does melt away!" she sighed. "And there are the handkerchiefs, and the gloves, and my school waists yet to get." It did seem as if \$50 would do so much.

A window filled with a fascinating display of French millinery caught her eye. The hat must be made sure of if she had to do without some other thing, she decided, and—"I'll just look around here a little," she said to herself, "though I certainly can't spend more than \$5."

She went in and was at once borne down upon by one of those modishly attired, pleasantly attentive milliner's assistants who are responsible for so many depleted purses. The very first hat she set upon Amy's blonde head, after a moment's careful study of the deep blue eyes and fair complexion, following the girl's announcement, "I am looking for something to wear with a brown suit," was a little creation of the milliner's art which made Amy catch her breath as she looked at herself. Surely nothing so pretty had ever rested upon the heads of her wealthy young cousins, although they fairly revelled in dainty headgear.

"It suits mademoiselle exquisitely well," commented the woman. "It is admirable, perfect, I would not change it a particle. I can show other hats, visions of beauty, but nothing so adapted to mademoiselle's charming style."

Amy surveyed herself at every angle in the cleverly arranged mirrors, her cheeks rosy with pleasure. "It is so small and plain it can't be expensive," she thought, and asked the price.

"Fifteen dollars, mademoiselle," said the woman, "and ridiculously cheap at that, for it is a French hat, a Camille Roger, see?" she displayed the lining. "It costs far more than that, but it is so simple it suits only the refined taste, and few have that, so it has been passed by. Madame but yesterday lowered the price, saying it was strange that such a gem remained unsold."

It was Amy's first experience, and the words had weight with her. It seemed out of the question at first to pay so much, when so many things were yet to be bought, but—ought she to let such a bargain slip? Her head whirled with arguments for and against the purchase. The idea of ordering a hat copied in less expensive materials and dispensing with the French trademark, a luxury most unimportant to a schoolgirl, did not occur to her. Still, if the saleswoman had left her alone for a moment, it is possible that the girl's judgment would have railed even then, but saleswomen rarely do leave their victims alone at critical moments, and it happened to Amy as to many wiser buyers that, with a figure waiting at her side, and a pair of coolly observant eyes upon her, her power of impartial decision was gone.

It was in quite an unfamiliar voice that she heard herself saying, seemingly without her own consent, "I will take the hat."

She hurried along the pavements, af-



ter paying the \$15—it left but 20 cents in her purse—feeling as guilty as if she had stolen the money. “I wonder when mother has had a new bonnet,” she thought. “Oh, what is the matter with me? I seem perfectly paralyzed when one of that sort of clerks gets hold of me. What am I going to do without gloves or handkerchiefs, and I never can make my old school waists respectable for going away!”

“Well you’re a good one,” cried a gay voice in her ear. “Where do you think you are? You’re five blocks from Stannard’s. I gave you up ten minutes ago. Did you miss Saunders street, or didn’t you mean to meet me after all?”

Stuart was rushing her along at a great pace, giving her no chance to explain that she was tired and did not care for the football game after all. He had her on board of an electric car in a twinkling and was smiling at her from the platform, where he made one of a mass of young fellows in college and preparatory school colors, who kept the car lively with their fun. He wondered why his usually blooming cousin looked so pale, but reflected wisely that shopping seemed to be tremendously hard on the women in spite of their being so fond of it.

Amy never clearly knew how she spent the next two hours. At any other times she would have considered the chance of seeing one of Stuart’s much-talked-of games the greatest pleasure that could come her way. To-day she sat listlessly upon the hard seat, with the people under whose wing Stuart had placed her, and thought of her day’s experiences straight through one of the most exciting games of the season.

“Wasn’t it glorious?” exulted Stuart, as he met her after the game, looking all colors and damp with perspiration, but radiant with joy over the victory of his own team. “Think of it—six to nothing over those braggarts! I tell you, our men were fit to the hour, every fellow of them. It wasn’t quite such a walkover as we expected, though. Their forwards did splendid work; it was their back-fielders lost them the game. Wasn’t that a beautiful punt of Thorpe’s down the sidelines? Maybe you didn’t notice that forty-yard run I made?” he added, modestly.

“Oh yes, it was splendid!” Amy agreed, trying to remember the play in question. Something in her voice made Stuart look curiously at her, but only the side of a pale cheek was turned toward him. “Something’s up,” he thought. “I won’t bother her with football jargon—she’s tired. Funny, though,” he considered, as he put her abroad the car for the return trip, she’s such a girl for her wheel and any sport, I shouldn’t think a morning’s shopping could do her up.”

By the time the car reached their train, Stuart had talked off his enthusiasm over the game with the crowd on the car, and was ready to give his cousin his serious attention. As the train drew out of the dark station into the western sunlight he observed that Amy’s eyes were full of tears. He bought an afternoon paper of the train-boy, and unfolding it held widespread, affecting to read as he carefully screened his companion from observation. After a time he asked gently: “Is it—er—anything I could help about, Amy?”

The answer was a genuine little sob, which Stuart fervently hoped nobody heard. Presently a tremulous voice murmured, “O Stuart, you won’t understand, but I must tell. I’ve been so foolish and so extravagant. I—”

“Fire away,” whispered Stuart, encouragingly, but it was some time before she could speak. The train was approaching Stuart’s suburban station before he had the whole story. Then he had to talk fast.

“See here, puss,” he said, “I don’t think you’ve been extravagant—Jove!—when I think what I spend. But I know how you feel, and I see you’d rather be shot than wear that hat and that forget-me-not thing. Now, I’ll tell you. You know Lydia and Nell think the world of clothes—more than they ought to, and more than likely they’d

fancy these of yours. If they don’t I’ll send ‘em back to you—I will—I swear it. Now let me have ‘em, will you? I expect the fellows’ll howl to see me carrying that bandbox,” he thought, “but no matter—I’ll make the girls keep ‘em, except to mother,” he declared, “and nobody but Aunt Esther need ever know. Here we are, is it a go?”

“O Stuart,” whispered Amy, gratefully, “you are so good! But please, please don’t let the girls take them unless they truly want them. Oh, I hope he won’t hurt that hat,” she breathed, a moment later, smiling through her tears, as Stuart waved the frail bandbox at her, from the back seat of a rapidly receding trap, driven by two pretty girls.

“By to-morrow I shall hear,” she told her mother, when the conference was over, the bundles opened, and the sensible purchases approved. But she had not even to sleep upon her troubles, for before bedtime a telegram arrived.

“The blessed boy,” cried Amy, as she read the brief but comforting message:

“Bargain satisfactorily concluded. Will send check to-morrow. Everybody happy. Congratulations. Stuart Brentwood.”—Grace S. Richmond.

#### Does Cutting Make Hair Grow?

The question, Does cutting promote the growth of hair? is answered by the Frankfurter Wochenblatt in this wise: “It is believed by laymen and professional hairdressers that cutting largely increases the growth of the hair. This belief begins with the involuntary comparison of the hair with a plant. As grass that is often cut short grows again and becomes thicker, so it is believed the hair should do when it is cut.

“This comparison, however, is a false one. A developed hair is a perfectly formed mass of horn which has nothing further to do with the case in which the hair rests than to receive from it from below further growth and to be held firmly by it. In this mass of horn, as in the nails of the fingers and toes, there is no longer any sap in circulation. This mass, so to speak, is a product which cannot be quickened and strengthened by new nourishment because the latter cannot enter it.

“On the other hand, what happens in a blade of grass is totally different. The blade of grass is a network of fine ducts in which is constantly circulating the nourishment which the blade draws from the root. It presents in contrast with the dead body of the hair a living, vegetating substance which has a most intimate connection with the condition of its root, and which dries up infallibly when it is separated from its root, while the hair will remain unaffected for thousands of years after its papilla has withered away.

“We need cite only one irresistible proof of this—the hair on the heads of mummies. The root of the hair as long as it exists can produce a new hair when the old hair has fallen out, while the root of many a plant gives existence to one sprout only, and then, together with it, declines and dies. The more a hair is disturbed in its natural growth by continually cutting off its ends, the less rest its papilla (the real producer of the hair) finds. The papilla, being constantly incited to excessive production, wavers finally in its activity, decays and dies.

“For this reason a woman with a bald head is never or seldom seen, as the natural and very slow process of the growth of a woman’s hair is not disturbed. The individual hair reaches a definite length, after years it falls out of itself, and a new hair begins to appear as soon as the papilla has had time to rest itself thoroughly and prepare itself for the process of a new growth. These are the reasons which lead to the obviously valid conclusion that cutting the hair is rather injurious than useful.”

LADY—Oh, how dirty your face is, little boy!”

Boy—Yes’m; we hain’t had no company for more’n a week.—Judge.

#### Drying Flowers in Sand.

For mounting on cards at Christmas and Easter dried flowers are both pretty and appropriate, and if arranged with taste the effect is often really lovely. Frequently, too, one desires to preserve a few flowers as a souvenir of friendship, or of a delightful visit, or of some happy hour which never can return.

The most popular method of preserving flowers is by pressing them flat between sheets of blotting paper under a heavy weight, but they are altogether more natural, and consequently more beautiful, if carefully dried in sand, says Vick’s.

To dry them properly by this method one requires only white scouring sand and dishes sufficiently deep to permit the flower to stand upright and be covered at least an inch with the sand. After the sand has been placed half an inch deep in the dish, the flowers should be placed stem downward in this sandy layer, arranged as naturally as possible and sprinkled very carefully with sand till the petals are filled and the whole blossoms quite covered. Then continue sprinkling until fully an inch of sand covers them. The sand must be perfectly dry to ensure success, and the flowers should also be gathered on a dry, sunny day.

After their burial in sand the flowers should be placed in a warm, dry situation for a week or ten days, then one should be carefully excavated and examined; if thoroughly dry, the others may also be removed. It is always well to have only flowers of one variety in the same dish, as some varieties require a much longer time to dry than others.

If, after inspection, the blossoms are found to be only imperfectly dried, the operation must be repeated. Every bit of sand should, in this case, be turned out of the dish, and if there is any trace of moisture, both dish and sand must be thoroughly dried before using them again, or, if preferred, fresh sand may be used.

Flowers dried in this way retain their beautiful forms, and the delicate lovely colors are preserved with remarkable success. They will keep perfectly for a very long time, even for years in some cases. Bright flowers, such as geraniums, verbenas, carnations, pinks, pansies, gladioli, violets, etc., are particularly adapted for this method. White flowers and very pale-tinted ones will not answer, nor will the plan succeed with succulent plants, as hyacinth, crassula and others. Ferns, however, do exceptionally well under this treatment, retaining their rich green, as they will not do when pressed between blotting paper.

Tiny gilded baskets of these flowers and fern fronds are lovely when tastefully arranged.

“HEAVENS!” cried Mr. Taffe, as he heard a terrible crash down stairs, “there’s Johnny exploding firecrackers in the house!”

“Nonsense,” said his wife, calmly. “That’s only the new girl washing the dishes.”—Brooklyn Life.

“ARE you old enough to vote?” asked the tourist in North Carolina.

“I dunno erzackly what my age is, boss,” replied the colored man. “But I can tell you dis: I allus was old enough to know better dan to try to vote.”—Washington Star.

“A MAN can’t be too careful whom he snubs.”

“What do you mean?”

“Why, every once in a while I’ve snubbed some plain people who afterwards came in to a lot of money.—Chicago Record.

JUDGE—You were begging on the public streets and yet had \$20 in your pocket.

Prisoner—Yes, jedge; I may not be as industrious as some, but I’m no spendthrift.—New York Weekly.

LADY of the house (to peddler)—If you do not go away I’ll whistle for the dog.

Pushing peddler—Then let me sell you a whistle, mum.—Tit-Bits.

#### DOMESTIC ECONOMY.

##### Domestic Hints.

GINGER SNAPS.—Rub half a pound of butter into one pound of flour, add half pound of sugar, half pound of syrup, and one ounce of ginger; knead well, roll out, and cut; bake in a moderate oven; when half cooked brush over with sugar and water syrup to glaze the surface. Ingredients: One pound flour, half pound sugar, half pound syrup, one ounce of ginger.

JELLIED APPLES.—Peel, halve and core six large apples. Make a syrup by boiling a pound of sugar and a pint of water. Let boil up once, then put in the apples with two lemons sliced, half a dozen cloves and a few sticks of cinnamon. As soon as the apples are tender, take them out carefully and arrange in a dish, hollow side up. Put a spoonful of currant or apple jelly in each. Boil down the syrup, let cool a little and pour over the apples.

LEMON CUSTARD.—This custard is made by adding to one quart of milk five eggs, one tablespoonful cornstarch and two lemons. Cream the butter and sugar, and add the yolks of the eggs beaten until light, then the juice and grated rind of the lemons; dissolve the cornstarch in the milk and add to the other ingredients. Bake in a buttered pudding dish until the custard is set, then cover it with meringue made of the whites of the eggs and one-third of a cupful of powdered sugar. Return to the oven and brown slightly; serve cold.

ARROWROOT SOUFFLE.—Mix four tablespoonfuls of arrowroot with a cup of cold milk, stir into it a pint of boiling milk flavored and sweetened to taste, return all to the saucepan, and stir while it boils for ten minutes; let it cool, and then add the yolks of six eggs well beaten. Having prepared the souffle tin add the stiffly whisked whites of six egg to the mixture, pour it into the tin, which should be three parts full, and bake in a quick oven for about twenty minutes; if over cooked it will fall. Serve at once in the tin with a serviette pinned round it.

##### Hints to Housekeepers.

To prepare grape juice, heat ripe grapes over a slow fire until the juice flows readily. Just before they reach the boiling point remove them from the fire and crush, squeeze and strain them. Add to the juice one pound of sugar for every quart. Return the mixture to the stove and bring gently to a boil. Remove, bottle at once and seal.

There is nothing so tempting for desert during the warm days as a bowl of fresh peaches. By placing the fruit on ice before paring, to become thoroughly chilled, one can avoid their discoloring, but the writer has tried the following with success: Place the fruit in a wire frying basket and plunge just for an instant in boiling water, and then into cold water. In this manner the skins may be rubbed off, leaving the fruit perfect and retaining the pink tinge which is so attractive. As soon as the outer part is removed, drop the fruit into ice water to prevent discoloration. When all are pared, split in halves, remove the pits, heap into a dish—glass, if possible—and serve with powdered sugar and thick, sweet cream.

Peaches intended for pickling should not be too ripe. Select fifty perfect ones, peel them, cut them in halves and remove the stones. Put into the preserving kettle a pint of cider vinegar, one and one-half pounds of granulated sugar and six or seven small spice bags, each containing a few whole cloves, a few pieces of whole mace, stick cinnamon and green ginger. Tie them carefully with a heavy thread. A circular piece of cheesecloth about three inches in diameter is the best for the purpose. As soon as the sugar melts add the peaches; boil them until they are tender. When putting into cans leave a spice bag in each can. Pears may be pickled in the same way.



# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Sept. 25, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	72 1/4 @ 70 1/2	75 1/4 @ 74 1/2
Thursday.....	71 1/4 @ 70 1/2	74 1/4 @ 73 1/2
Friday.....	71 1/4 @ 70 1/2	74 1/4 @ 73 1/2
Saturday.....	70 3/4 @ 71	73 3/4 @ 74
Monday.....	70 3/4 @ 70 1/2	73 3/4 @ 74
Tuesday.....	70 3/4 @ 70 1/2	73 3/4 @ 74

### CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	37 1/4 @ 36 1/2	39 1/4 @ 38 1/2
Thursday.....	36 1/4 @ 36 1/2	38 1/4 @ 38 1/2
Friday.....	36 1/4 @ 36 1/2	38 1/4 @ 38 1/2
Saturday.....	36 1/4 @ 36 1/2	38 1/4 @ 38 1/2
Monday.....	36 1/4 @ 36 1/2	38 1/4 @ 38 1/2
Tuesday.....	36 1/4 @ 36 1/2	38 1/4 @ 38 1/2

### SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	99 1/4 @ 99 1/2	1 03 1/4 @ 1 03 1/2
Friday.....	99 1/4 @ 99 1/2	1 03 1/4 @ 1 03 1/2
Saturday.....	99 1/4 @ 99 1/2	1 03 1/4 @ 1 03 1/2
Monday.....	99 1/4 @ 99 1/2	1 03 1/4 @ 1 03 1/2
Tuesday.....	99 1/4 @ 99 1/2	1 03 1/4 @ 1 03 1/2
Wednesday.....	99 1/4 @ 99 1/2	1 03 1/4 @ 1 03 1/2

\*Adjourned.

### WHEAT.

The market has been decidedly slow for this cereal most of the week under review, and values have averaged lower than last quoted. Not only are prices at a low range, but the movement continues light, the labor strikes here and at Port Costa interfering with the loading of vessels. On account of the strikes, much of the coastwise business in lumber and various lines has been diverted temporarily, if not permanently, to the railroads, and this in turn has caused a scarcity of cars, making it impossible to get wheat to tidewater as rapidly as desired. Foreign conditions have been by no means favorable for wheat, and locally the situation has been rendered still worse by the labor troubles. With the rainy season at hand, and large quantities of grain in the interior exposed to the elements, the outlook is certainly not an encouraging one. There is this to be said, however, that action is likely to be taken which will prevent for some years to come a recurrence of the present deplorable state of affairs. The visible supply of wheat in the United States east of the Rockies was the past week increased 1,753,000 bushels, being now reported at 32,625,000 bushels.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, 99 1/4 @ 99c.	
May, 1902, delivery, \$1.03 1/4 @ 1.03 1/2.	
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at 99 1/4 @ 99 1/2; May, 1902, \$1.03 1/4 @ 1.03 1/2.	
California Milling.....	\$1.00 @ 1.05
Cal. No. 1 shipping, alongside.....	95 @ 97 1/2
Oregon Valley.....	95 @ 1.00
Washington Blue Stem.....	97 1/4 @ 1.02 1/2
Washington Club.....	95 @ 97 1/2
Of qualities wheat.....	92 1/2 @ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s 6d @ s-d 5s 10 1/4 @ s 5 11 1/2	6s 10 1/4 @ s 5 11 1/2
Freight rates.....	40 @ 42 1/2 s	36 1/2 @ 37 1/4 s
Local market.....	\$1.05 @ 1.06 1/4	95 @ 96 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### FLOUR.

Heavy shipments were made the past week to China. The quantity going to South America is showing some decrease, as compared with the past few months, but is still of fair volume. Business on local account is of moderate proportions. Quotations are unchanged, but there is more or less shading of rates, the market lacking firmness.

Superfine, lower grades.....	\$2.25 @ 2.40
Superfine, good to choice.....	2.50 @ 2.75
Country grades, extras.....	3.00 @ 3.25
Choice and extra choice.....	3.25 @ 3.50
Fancy brands, jobbing.....	3.50 @ 3.65
Oregon, Bakers' extra.....	2.75 @ 3.15
Washington, Bakers' extra.....	2.75 @ 3.25

### BARLEY.

Considering the small export movement lately from this port of nearly all kinds of produce and merchandise, owing to the hampered facilities for getting goods afloat, barley has been meeting with fair dispatch. Shippers have made extraordinary exertions to forward barley for the reason that considerable is wanted abroad

as speedily as possible, and delayed shipments would mean the loss of so much custom for the California product. One steamer clearing the past week took 5000 tons of this cereal for England, and another steamer departed with nearly 4000 tons for Belgium. Two sailing vessels cleared, each carrying about \$50,000 worth of barley for the United Kingdom. A ship arrived under engagement to load barley for New York. Values for shipping grades are fairly well maintained. Market for feed descriptions is quiet and easy, but not quotably lower.

Feed, No. 1 to choice.....	72 1/4 @ 73 1/4
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	75 @ 82 1/2
Chevalier, No. 1 to choice.....	97 1/4 @ 1 02 1/4
Chevalier, poor to fair.....	75 @ 90

### OATS.

Demand has not been particularly brisk the current week, most buyers deferring their purchasing as much as their necessities would permit, expecting to be able to operate to better advantage a little later, when Oregon and Washington begin to forward freely. Asking rates and quotable values are without special change, but market cannot be termed firm.

White Oats, fancy feed.....	1.30 @ 1.25
White, good to choice.....	1.15 @ 1.20
White, poor to fair.....	1.00 @ 1.10
Gray, common to choice.....	1.00 @ 1.17 1/2
Milling.....	1.15 @ 1.25
Surprise, good to choice.....	1.22 1/4 @ 1.27 1/4
Black Russian.....	85 @ 1.15
Red.....	95 @ 1.20

### CORN.

Market remains unfavorable to buyers, with stocks and offerings so insignificant that it is difficult to name prices. The demand at anything near current values, however, is quite limited.

Large White, good to choice.....	1.70 @ 1.75
Large Yellow.....	1.65 @ 1.70
Small Yellow.....	1.75 @ 1.80
Eastern, in bulk (carload lots).....	1.60 @ 1.65

### RYE.

Some shipments are being made to Europe, but at low prices. Demand on local account is very light.

Good to choice, new.....	77 1/4 @ 80
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### BUCKWHEAT.

Millers are talking comparatively low figures, expecting to be able to get all the buckwheat they need at the reduced quotations.

Good to choice.....	1.40 @ 1.60
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### BEANS.

There have been tolerably free arrivals the past week of Lady Washingtons and Bayos of new crop, but not many new beans of any other variety. Market for the kinds above specified has shown weakness, more especially for Bayos, which have sold at a material decline. Values for other beans have not inclined materially in favor of buyers. Pinks were held at a slightly higher range than last quoted. Limas are offered sparingly and are steadily held.

Pea, fair to good, 100 lbs.....	4.75 @ 5.00
Small White, good to choice.....	4.90 @ 5.00
Lady Washington.....	2.75 @ 3.00
Pinks.....	2.40 @ 2.60
Bayos, good to choice.....	2.50 @ 2.75
Reds.....	3.00 @ 3.25
Red Kidney.....	4.00 @ 4.25
Limas, good to choice.....	6.40 @ 6.50
Black-eye Beans.....	3.30 @ 3.50
Garbanzos, large.....	2.00 @ 2.25
Garbanzos, small.....	1.25 @ 1.50

### DRIED PEAS.

Heavy arrivals and offerings of Green or Blue Peas, mainly from Salinas section, have caused market to rule weak and lower, with values rather poorly defined at this date. Niles Peas are in fair request, and for this variety the prevailing values are being moderately well sustained.

Green Peas, California.....	2.00 @ 2.50
Niles Peas.....	1.50 @ 1.65

### WOOL.

There is as much business doing in this center as could be reasonably expected under the circumstances, stocks and offerings being light, especially of such fleeces as are most in request, viz., fine free wools. Market for all desirable Fall stock is firm at the quotations, there being no trouble in securing prompt custom at current rates for wool of this sort.

### SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

### FALL.

Humboldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 11
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 1/2 @ 8 1/2
San Joaquin Lambs.....	7 1/2 @ 9

### HOPS.

In the way of transfers from growers,

there is no evidence of anything of consequence doing. Some claim that there will be a shortage, and that hops will sell to better advantage later on. Present values are poorly defined. Growers are asking 15c for choice, but there are just now no wholesale buyers willing to pay 12 1/2c.

Good to choice 1901 crop..... 11 @ 13

### HAY AND STRAW.

The quantity of hay arriving is not particularly heavy, but of other than most select qualities there is an abundance for the immediate demand and the present limited facilities for handling shipments. More hay would be arriving if the cars were obtainable to bring the same forward. Choice to select qualities are meeting with a moderately firm market, but for the more common grades the situation inclines against sellers.

Wheat, good to choice.....	7.50 @ 10.50
Wheat and Oat.....	7.00 @ 9.50
Oat.....	6.50 @ 9.00
Alfalfa.....	8.50 @ 10.50
Clover.....	5.50 @ 7.00
Stock.....	5.00 @ 7.00
Compressed.....	8.00 @ 10.00
Straw, 1/2 bale.....	25 @ 40

### MILLSTUFFS.

No special changes have been made this week in quotable values for millstuffs, but an easier tone prevails. Many of the flouring mills which had been idle are again running. Increased supplies and lower prices for mill offal are looked for at an early day. Rolled Barley and Milled Corn were held virtually as last quoted.

Bran, 1/2 ton.....	20.00 @ 21.00
Middlings.....	21.00 @ 22.50
Shorts, Oregon.....	20.00 @ 21.00
Barley, Rolled.....	17.00 @ 17.50
Cornmeal.....	34.00 @ 35.00
Cracked Corn.....	35.00 @ 36.00

### SEEDS.

Mustard Seed has been in fair receipt the past week, mostly from Lompoc section, and is now on market in quotable quantity, both Yellow and Trieste. There is a moderate demand for both kinds for shipment and also on local account. Other seeds are quiet at nominally unchanged values.

	Per cwt.
Flax.....	2.50 @ 3.00
Mustard, Yellow.....	3.15 @ 3.25
Mustard, Trieste.....	3.00 @ 3.15
	Per lb.
Canary.....	3 1/4 @ 3 1/2
Rape.....	1 1/4 @ 1 1/2
Hemp.....	3 1/4 @ 3 1/2

### BAGS AND BAGGING.

The Grain Bag market has relapsed into the inactive condition customary for the Winter season. Demand for Wool Bags on account of Fall clip is about satisfied. Fruit Sacks are meeting with a little inquiry, prices for same remaining steady.

Calcutta Grain Bags, spot.....	7 1/4 @ 7 1/2
San Francisco Grain Bags, 22x36, spot.....	7 @ 7 1/4
Wool Sacks, 4 lbs.....	31 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 31
Fleece Twine.....	8 1/4 @ 8 1/2
Gunnies.....	— @ —
Bean Bags.....	5 1/2 @ 5 1/4
Fruit Sacks, cotton, three sizes.....	5 1/2, 6, 6 1/4
Fruit Sacks, Jute.....	7 @ 7 1/4

### HIDES, PELTS AND TALLOW.

The Hide market is tolerably firm, there being no lack of demand at prevailing values. Pelts are ruling steady, but inquiry is not especially active at full current rates. Tallow is meeting as a rule with prompt sale at full prices.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	10 1/4 @ 9	8 @ 8
Medium Steers, 48 to 56 lbs.....	9 1/4 @ 8	8 @ 8
Light Steers, under 48 lbs.....	8 1/4 @ 9	8 @ 8
Heavy Cow Hides, over 50 lbs.....	9 @ 8	8 @ 8
Light Cow Hides, under 50 lbs.....	8 1/4 @ 9	8 @ 8
Wet Salted Kip.....	9 @ 8	8 @ 8
Wet Salted Veal.....	9 @ 8	8 @ 8
Wet Salted Calf.....	10 @ 9	9 @ 8
Dry Hides.....	16 @ 14	14 @ 13
Dry Kip and Veal, 11 to 16 lbs.....	16 @ 13	13 @ 12
Dry Calf, under 4 lbs.....	17 @ 15	15 @ 14
Salted Horse Hides, large.....	2.50 @ 2.00	2.00 @ 1.50
Salted Horse Hides medium.....	2.00 @ 1.50	1.50 @ 1.00
Salted Horse Hides, small.....	1.00 @ .75	.75 @ .50
Dry Horse Hides, large.....	1.75 @ 1.50	1.50 @ 1.25
Dry Horse Hides, small.....	1.00 @ .75	.75 @ .50
Dry Colts' Hides.....	50 @ 40	40 @ 30
Pelts, long wool, 1/2 skin.....	75 @ 60	60 @ 50
Pelts, medium, 1/2 skin.....	50 @ 40	40 @ 30
Pelts, short wool, 1/2 skin.....	30 @ 25	25 @ 20
Pelts, shearing, 1/2 skin.....	10 @ 25	25 @ 20
Deer Skins, best summer.....	35 @ 30	30 @ 25
Deer Skins, good medium.....	— @ 30	30 @ 25
Deer Skins, thin winter.....	— @ 10	10 @ 8
Elk Hides.....	10 @ 12	12 @ 10
Tallow, good quality.....	4 1/4 @ 4 1/2	4 1/2 @ 4 3/4
Tallow, No. 2.....	3 1/4 @ 3 1/2	3 1/2 @ 3 3/4
Goat Skins, perfect.....	30 @ 20	20 @ 15
Goat Skins, damaged.....	10 @ 20	20 @ 15
Kid Skins.....	5 @ 10	10 @ 15

### HONEY.

The market is not heavily stocked, but there is more offering, both comb and ex-

tracted, mainly amber grades, than immediate custom can be obtained for at full current rates. Holders as a rule are not, however, disposed to exert any undue selling pressure.

Extracted, White Liquid.....	5 1/4 @ 4
Extracted, Light Amber.....	4 1/4 @ 4
Extracted, Amber.....	4 @ 4
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7

### BEESWAX.

Market is lightly stocked. There is a fair inquiry at current rates, mainly on export account.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 25

### LIVE STOCK AND MEATS.

Beef is commanding steady prices, with trade fair. Mutton is in moderate supply and is selling at generally unchanged rates, demand being about up to the average for this season. Lamb is without quotable change, but there is a sufficiency for immediate needs. Veal is in light receipt, although not quotably higher. Hog market is showing weakness, there being an increase of offerings, but no pronounced declines are looked for.

Beef, first quality, dressed, net 1/2 lb.....	6 @ 6 1/4
Beef, second quality.....	6 @ 6
Beef, third quality.....	5 1/2 @ 6
Mutton—ewes, 6 @ 70; wethers.....	7 @ 7 1/4
Hogs, hard grain fed, medium.....	6 @ 6 1/2
Hogs, small, fat.....	6 @ 6 1/2
Hogs, large, hard.....	5 1/2 @ 5 1/4
Hogs, country dressed.....	7 1/4 @ 7 1/2
Veal, small, 1/2 lb.....	8 @ 10
Veal, large, 1/2 lb.....	8 @ 8 1/2
Lamb, spring, 1/2 lb.....	7 1/4 @ 8

### POULTRY.

There were lighter receipts of both domestic and Eastern than preceding week, but owing to the heavy stock carried over and the limited inquiry for fresh arrivals, the market was not given chance to recover to any great degree from the depressed condition existing last week. Such slight change as did occur, however, was for the better. The most positive inquiry was for choice young stock.

Old Turkeys, five hens, 1/2 lb.....	12 @ 13
Old Turkeys, live gobblers, 1/2 lb.....	9 @ 10
Young Turkeys, full grown.....	15 @ 16
Hens, California, 1/2 dozen.....	3.50 @ 4.50
Roosters, old.....	3.50 @ 4.00
Roosters, young (full-grown).....	4.00 @ 4.50
Fryers.....	3.00 @ 3.50
Broilers, large.....	3.00 @ 3.50
Broilers, small.....	2.50 @ 3.00
Ducks, old, 1/2 dozen.....	3.00 @ 3.50
Ducks, young, 1/2 dozen.....	3.50 @ 4.00
Geese, 1/2 pair.....	1.50 @ 1.75
Goslings, 1/2 pair.....	1.50 @ 1.75
Pigeons, old, 1/2 dozen.....	1.25 @ 1.50
Pigeons, young.....	1.75 @ 2.00

### BUTTER.

An easy tone prevails in the butter market for all grades of fresh, and especially for other than most favorite marks engaged ahead for special trade. Sales of the latter were made above quotable rates. Retailers and consumers are now running heavily on cold storage butter, which accounts for the slow market for fresh product.

Creamery, extras, 1/2 lb.....	25 @ 26
Creamery, firsts.....	21 @ 22
Creamery, seconds.....	20 @ 21
Dairy, select.....	22 @ 23
Dairy, firsts.....	19 @ 20
Dairy, seconds.....	18 @ 19
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll, 1/2 lb.....	19 @ 20
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/2

### CHEESE.

Market shows generally healthy condition, with no excessive offerings of either regular flats or small sizes. Trade is of very fair volume. Favorite marks going to special custom are commanding above quotable rates.

California, fancy flat, new.....	11 @ 12
California, good to choice.....	10 @ 10 1/2
California, fair to good.....	9 1/2 @ 10
California Cheddar.....	— @ —
California, "Young Americas".....	12 @ 12 1/2



quoted herewith went at much the same figures as were current the preceding week, but the general trend of the market was more favorable to the buying than to the selling interest. Choice Green Corn was not in heavy stock, and in a small way brought above quotable rates. Most of the Green Corn now coming forward is more or less defective, besides much of it is too matured to be desirable.

Asparagus, box.....	— @ —
Beans, String, box.....	2 @ 3
Beans, Lima, box.....	2½ @ 3½
Beans, Wax, box.....	3 @ 3½
Cabbage, choice garden, box 100 lbs.....	40 @ 50
Cauliflower, dozen.....	40 @ 50
Corn, Green, sack.....	50 @ 75
Corn, Green, Alameda, large crate.....	75 @ 125
Cucumbers, Bay, large box.....	25 @ 40
Egg Plant, box.....	35 @ 50
Garlic, box.....	2 @ 3
Okra, Green, box.....	35 @ 50
Onions, Yellow Danver, cental.....	90 @ 110
Peas, Sweet garden, box.....	2 @ 2½
Peas, good to choice, sack.....	— @ —
Peppers, Green Chile, sack.....	30 @ 50
Peppers, Bell, box.....	40 @ 60
Squash Summer, small box.....	25 @ 40
Summer Squash, Bay, large box.....	50 @ 75
Tomatoes, large box.....	25 @ 40
Tomatoes, small box.....	15 @ 30

POTATOES.

Market has been quiet most of the week, both for shipment and on local account. Receipts were not especially heavy, but offerings were more than enough to accommodate the immediate demand, and prices tended in favor of buyers, particularly for other than most select qualities, although in quotable values there were no pronounced changes.

Burbanks, Salinas, box 100 lbs.....	1 30 @ 1 60
San Leandro, in sacks, cental.....	1 25 @ 1 50
River Burbanks in sacks, cental.....	75 @ 1 20
Mission Garnet Chile, in sacks.....	1 00 @ 1 30
Sweets, new, cental.....	50 @ 1 00

The Fruit Market.

FRESH FRUITS.

The market for fresh fruits was not heavily stocked with choice to select of any variety, but there was a surfeit of low-grade fruit, most of it being stock which had been carried over from preceding week. For this common and defective fruit the market lacked firmness, while for fresh arrivals of choice to select comparatively good figures were realized, higher prices being obtained in some instances for particularly desirable fruit than it would be safe to quote in a regular way. Apples are not offering in heavy quantity, and for all desirable stock the market is firm, with prospects of so continuing. Peaches are showing decreased receipt, but in the matter of quotable rates there is no special improvement to record, the market ruling weak for ordinary qualities. Pears of the early varieties are practically out of stock, other than ice-house holdings. Late Pears are in fair supply, but are mostly too green to be suitable for immediate use. Plums are selling at much the same range of prices as last quoted, with offerings and demand both of rather moderate volume. Table Grapes were in fair request, with offerings of other than fancy seedless sufficient to accommodate the existing demand at current rates. Wine Grapes are in light receipt and higher, but are commanding relatively better figures in the interior than in this center. Cultivated berries of all varieties in season were in such light supply as to be hardly quotable in a wholesale way. Whortelberries were in fair receipt, prices ruling steady. Melons did not fare so well as preceding week, the weather being less favorable for consumers taking hold. Especially did the market for Watermelons lack activity and strength.

Apples, fancy, 4-tier box.....	1 25 @ 1 50
Apples, good to choice, 50-lb. box.....	50 @ 1 00
Apples, common to fair, 50-lb. box.....	35 @ 50
Apples, green, 50-lb. box.....	35 @ 60
Blackberries, chest.....	3 50 @ 5 00
Cantaloupes, crate.....	50 @ 1 00
Figs, drawer and box.....	25 @ 75
Grapes, Isabella, crate.....	40 @ 75
Grapes, Black, crate.....	40 @ 65
Grapes, Muscat, crate.....	40 @ 65
Grapes, Tokay, crate.....	40 @ 65
Grapes, Zinfandel, ton.....	27 00 @ 31 00
Grapes, White, ton.....	18 00 @ 20 00
Logan Berries, chest.....	— @ —
Nutmeg Melons, crate.....	40 @ 65
Peaches, box.....	30 @ 65
Pears, Bartlett, 40-lb. box.....	1 00 @ 1 50
Pears, other kinds, box.....	35 @ 75
Plums, crate.....	40 @ 75
Pomegranates, box.....	50 @ 75
Prunes, crate.....	40 @ 75
Quinces, box.....	30 @ 50
Raspberries, chest.....	6 00 @ 7 00
Strawberries, Longworth, chest.....	6 00 @ 7 00
Strawberries, Large, chest.....	4 00 @ 5 00
Watermelons, 100.....	5 00 @ 15 00
Whortelberries, lb.....	6 @ 8

DRIED FRUITS.

A quiet week has been experienced in the market for cured and evaporated fruits, few orders being received, either Eastern or foreign. Early shipments are satisfying the trade East and abroad for the time being in most of the varieties

which have already gone forward. Of most kinds now on market, with the exception of Apples and Prunes, fully 75 per cent. of this season's output of California dried fruit has already passed into second hands. But for this fact, lower prices would be probably to-day current on Peaches, and there would be less firmness on Apricots, Pears and Prunes. Quotable values on above kinds remain without appreciable change, owing to there being no heavy offerings from first hands and no undue selling pressure. If stock was crowded to sale, however, lower prices would have to be accepted. Apples are weak and slow, owing to corresponding condition East, but are not quotably lower than at time of last report, and to purchase freely at this date full current figures would have to be paid. Fig market is steady for good to choice pressed, but common in sacks are not readily placed in round lots at current quotations, although difficult to obtain for less money. Old Prunes remain quotable on the 3@3½c. basis for the four sizes, but business in new crop is at 3½@3¾c. for the four sizes, and packers are showing no desire to contract heavily at these prices, the future of the market not being very well defined and prospects being more favorable for firmer than for easier figures for current season's output of Prunes. This week's showery weather is believed to have done no damage to the Prunes now in process of curing.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7½ @ 8
Apricots, Royal, choice, in sacks, box.....	9 @ 10
Apricots, Moorpark.....	10 @ 13
Apples, in 50-lb boxes, rings, pressed, fancy.....	8 @ —
Apples, 50-lb boxes, rings, pressed, good to choice.....	7 @ 7½
Figs, pressed.....	5 @ 7½
Nectarines, box.....	5½ @ 7
Peaches, unpeeled, fancy.....	7 @ 7½
Peaches, unpeeled, choice.....	6 @ 6½
Peaches, peeled, in boxes.....	12 @ 14
Pears, halves, choice to fancy.....	7½ @ 9
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	5½ @ 6½
Prunes, Silver.....	— @ —
Prunes, 4 sizes, in bags, 3@3¼c; 50-60s, 4¼@4½c; 60-70s, 3½@4c; 70-80s, 3¼@3½c; 80-90s, 2½@3c; 110s and less, 2@—c.; these figures for 1900 crop; New Prunes fully ¼c. higher.	

COMMON SUN-DRIED.

Apricots.....	6 @ 7
Apples, sliced.....	4 @ 5
Apples, quartered.....	4 @ 5
Figs, Black.....	3 @ 3½
Figs, White.....	3½ @ 4
Peaches, unpeeled.....	5½ @ 6½
Pears, prime halves.....	5½ @ 6½
Plums, unpitted, lb.....	1¼ @ 2¼

RAISINS.

There is not much doing in raisins of any sort. Old are practically out of the way, and contracting of new crop fruit has not been of sufficient dimensions to enable giving quotations. There will probably be considerable business as soon as there is something definite regarding the course to be pursued by the Raisin Growers' Association in the campaign now opening. Some damage was done to the raisin crop by the showers of Sunday and Monday, the exact amount of which in dollars and cents cannot be stated, but it is hoped it will not prove very great.

CITRUS FRUITS.

Oranges are not offering in heavy quantity, but there are enough to cause the market to rule weak, the demand being of insignificant volume, other and more seasonable fruits receiving at present the attention of most consumers. Lemon market is lacking in activity and firmness, although some benefit may result to this fruit temporarily in the home market through the reduced stocks and higher prices of Limes.

Oranges—Valencias, box.....	1 00 @ 2 50
Lemons—California, select, box.....	2 75 @ —
California, good to choice.....	2 00 @ 2 50
California, common to fair.....	75 @ 1 75
Limes—Mexican, box.....	4 00 @ 4 50

NUTS.

The Walnut Growers' Association of southern California has fixed the price for current crop at 9½c. for No. 1 soft shell, 7½c. for No. 2; 9c. for No. 1 hard shell, 7c. for No. 2. These figures are for deliveries aboard cars at producing points. The crop is estimated at 500 carloads, fully 75% being under control of the association. The almond market is ruling steady, with no heavy offerings from either first or second hands. Peanuts are in only moderate supply and are in fair request at unchanged values.

California Almonds, shelled.....	18 @ 22
California Almonds, paper shell, lb.....	12 @ 14
California Almonds, soft shell.....	11 @ 12½
California Almonds, hard shell.....	8 @ 10
Cal. White Walnuts, No. 1 soft shell.....	9½ @ —
Cal. White Walnuts, No. 2 soft shell.....	7½ @ —
Cal. White Walnuts, No. 1 hard shell.....	9 @ —
Cal. White Walnuts, No. 2 hard shell.....	7 @ —
Peanuts, California, fair to prime.....	4½ @ 5½
Peanuts, Eastern, hand-picked.....	5½ @ 6
Pine Nuts.....	5 @ 6

WINE.

In the wholesale market there is nothing

of consequence to note in the way of business in last year's wines, and there will be little upon which to base quotations until this year's product is ready for market and begins to move. Dry wines of 1900 are quoted nominally at 25@30c. per gallon, with wholesale market bare of offerings. Receipts of wine at San Francisco last month were 357,900 gallons and for the eight months ended the 1st inst. were 10,650,200 gallons. For August, 1900, receipts were 1,030,800 gallons, and for first eight months of that year were 9,464,400 gallons. Grapes for dry wines are meeting with an active demand and a firm market, but are ruling higher in the interior than in this center. In this city \$30 is an extreme for choice Zinfandel, with common black quotable at \$26@28 per ton. The Wine Dealers' Association is reported paying \$26 in Napa and Sonoma.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, ½ sacks.....	57,898	1,337,162
Wheat, centals.....	106,063	803,030
Barley, centals.....	114,242	1,283,245
Oats, centals.....	18,615	273,079
Corn, centals.....	1,145	15,250
Rye, centals.....	1,680	10,035
Beans, sacks.....	11,592	42,379
Potatoes, sacks.....	30,242	330,248
Onions, sacks.....	3,441	75,266
Hay, tons.....	2,991	33,554
Wool, bales.....	1,492	19,214
Hops, bales.....	30	422

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, ½ sacks.....	34,980	1,020,856
Wheat, centals.....	83,201	661,814
Barley, centals.....	137,015	917,188
Oats, centals.....	160	1,500
Corn, centals.....	—	7,892
Beans, sacks.....	107	1,876
Hay, bales.....	30	771
Wool, pounds.....	341,316	233,621
Hops, pounds.....	18,760	76,900
Honey, cases.....	26	1,446
Potatoes, pack's.....	988	9,149

California Dried Fruit at New York.

NEW YORK, Sept. 25.—Evaporated apples, common, 5@8c; prime, wire tray, 8¼@8½c; choice, 9c; fancy, 9½@9¾c. California Dried Fruits.—Trade is of rather light volume, but at generally unchanged values. Prunes, 3¼@7c. Apricots, Royal, 8¼@13c; Moorpark, 9¼@14c. Peaches, unpeeled, 6@9½c; peeled, 11@15c.

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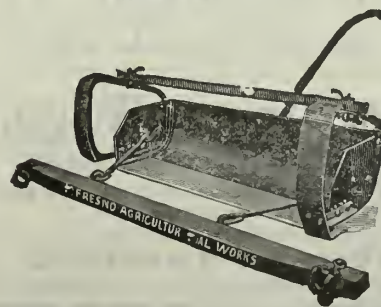
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## THE IRRIGATOR.

### Storing Water in Mountain Canyons.

By J. P. WILLIAMS at the University Farmers' Institute at Villa Park.

The most important subject for consideration before the people of southern California at the present time is how to increase the water supply. Much money has been invested in expensive pumping plants; deep wells have been dug and a large amount of water has been taken out of the earth to supply the demand for irrigation. So much has been used from this source that there are indications that the continued pumping will exhaust the percolating waters, as the deep wells in the Santa Ana valley lowered by pumping at the rate of a foot a month during last year. I believe something must be done to increase the percolating water supply or we shall at no distant day find ourselves in a desert land.

The value of vegetation and the growth of timber in the mountains have been proven of so much importance that the National Government has seen fit to apportion and reserve the mountain land for forests and furnish guards to protect against ravages by fire. It is an important factor in increasing the percolating water. Should the rainfall come during several months or in the shape of snow it will enter the ground, otherwise a sharp, heavy rainfall will soon seek the lower valleys and the ocean by overflowing rivers and when the summer months come we have little water for irrigation.

Attention is called to the condition of the mountain water courses. We find them worn down to bed-rock, deep chasms with high, precipitous sides with many gorges. Now we believe that if the gorges are filled by rock blasted into the chasms it will accomplish a double purpose: the obstruction of the flowing water and debris which the flood water carries. The filling up of these mountain chasms with debris is of vast importance in securing the desired result in impounding water. If we dam up the gorges nature's strong arm of storm and wind will do the labor of filling up with water-holding material. I do not hesitate to say that the mountain canyons can be made to hold more water with less expense than any other method that can be devised.

I desire to speak chiefly of the development of water in the mountains of the vicinity of Villa Park, as I have studied the question on the ground for the past eighteen years and know whereof I speak, but I think that wherever in California the source of supply for irrigation is derived from the mountain streams what I have to say will apply where the conditions are similar.

**HOW THE WATER IS LOST.**—Now let us examine the 38,000 acres of watershed which furnishes water for Santiago creek. There are five distinct canyons which empty water into it. These canyons range from 5 to 8 miles in length. They all have high, precipitous walls, their water courses have a fall 150 feet on an average to the mile, with very little obstruction to the water, and when even an inch of rain falls these canyons become river beds, but two hours after the rain ceases these streams almost stop flowing, and the Santiago creek has discharged to the ocean water enough to irrigate several thousand acres of land. To make the loss greater the lower hills, which are composed chiefly of a clay soil, have mingled their waters impregnated with clay with the mountain stream and formed a thin coating of clay sediment over the bed of gravel, thus allowing but little of the water to soak in.

**HOW TO SAVE THIS WATER.**—What to do to prevent this great waste of water in a land where water is worth \$1000 an inch is a question of no small importance. The 12 miles of the Santiago canyon above where water is taken out for irrigation, ranges from 40 to 100 rods in width and

the gravel bed of the stream ranges 15 to 30 feet in depth. Where it is broad and deep 200 inches of water will not be seen on the surface, but several heads will percolate through the gravel. It takes from 12 to 20 inches of rainfall to fill this gravel bed, for the reason that the water is discharged too fast to have time to be absorbed by the gravel bed. Therefore our main object is to hold back and obstruct the water in the small canyons until the first of June if possible, allowing it to feed the main stream by percolation.

There are two methods of accomplishing this result, first: by building reservoirs in the upper canyons wherever practicable, as Madame Modjeska has recently done at Arden, and second: by hiring men who understand the use of dynamite to blast the rocks into the chasms and fill the mouths of gorges with rock and debris which will effectually hold back the mountain water for use during the summer and fall.

I believe that \$1000 expended in each of these canyons would double the waterflow of the Santiago creek during the months of August, September and October, when our stream is usually the smallest, and should we have a season of light rainfall or no late rains, or if most of the rain should fall in one month, it would insure safety to our orchards.

I could add that these upper canyons are on Government land open to be filed upon, and locations can be made for dams and reservoirs with very little expense. As this method of obtaining water requires no expensive pumping plants or machinery of any kind you can readily see that it will be a good investment for the irrigators, as their land will double in value with double the amount of water they now have.

I would farther add that in the recesses and shade of the mountains is the proper place to store water. Evaporation is much less: the water is stored high up above the filth of the cattle ranges and the alfalfa and oil fields of the lower valleys. The water in the mountains comes direct from the hand of God—pure as crystal, life and health is in it for you and your children.

### Storage of Water.

By F. D. COLLINS, at the University Farmers' Institute at Villa Park.

During the past three or four years the fruit growers of southern California have learned more than ever before the value of water. Especially in this neighborhood (Villa Park and El Modena) have the people learned that, with plenty of water, their land is valuable; while with little or no water, the more land they own the worse off they are.

**A SUBMERGED DAM.**—The Serrano Water Association, composed of about seventy land owners, making the settlement known as Villa Park, and the J. T. Carpenter Co. of El Modena, are joint owners of the water of the Santiago creek. In 1892 the two companies built a submerged dam in the canyon at a point where the water is taken from the creek. The dam is about 110 feet wide across the stream, and from 6 feet deep in the shallowest part to 19 feet in the deepest. It was built with boulders of all sizes laid in cement mortar, and cost \$3600—averaging for the two companies about \$1.25 per acre. I think there is no doubt in the minds of the members of these two companies as to the effectual stopping of and bringing to the surface all of the underflow of the stream.

The Santiago canyon is quite steep, the grade being something like 75 feet to the mile, and soon after a rain of any consequence a large volume of water rushes down over our dam, and often—especially early in the season—lasts for one or two days only, and in a very few days the stream is down to about the

size it was before the rain. Now, the question with the people has been how to hold back some of this surplus water and have it to use for a month or two, instead of a day or two.

**SUBTERRANEAN RESERVOIR PROPOSED.**—Fortunately, the members of these two associations are the owners of property known as the Barham ranch, situated in the Santiago canyon, about half a mile above the submerged dam. About seventy acres of this ranch are comparatively level and can easily be irrigated or covered by the waters of the creek. In the fall of 1899 the members of the Association decided to build a storage reservoir on a part of the ranch, and a levee was thrown up on two sides of ten or twelve acres, being, of course, the two lower sides.

When sufficient rain had fallen to raise the creek, the water was turned in, and before the reservoir was more than two-thirds full the levee gave way and a greater part of the water was lost. It is supposed that a gopher hole through the levee was the cause of the break. Once since then the bank gave way and the water was lost, excepting that which had gone into the ground and drained back into the stream later. During the past winter we decided not to fill the reservoir to more than half its capacity, and thereby run less risk of breaking the levee. We did so, and for several months kept a stream of from 50 to 150 inches running in, the greater part of which soaked into the ground, the soil being a sandy loam, with gravel underneath. Now, this water that went into the ground during the winter and spring has undoubtedly helped to keep our irrigating stream this summer, and I fully believe we will not have the last of it by the time the first rain comes. The principal object is to hold back the surplus water, not only on the ground, but in the ground, instead of allowing it to run off to the ocean within a day or two after it falls from the clouds.

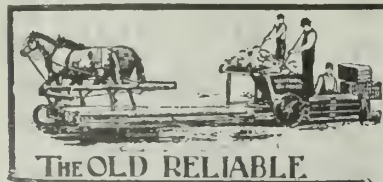
**HOW TO HOLD THE WATER.**—The point I wish to make clear is: that by holding back the flood water on as many acres as possible, and as far from the creek channel as we can put it, then, as it slowly drains back to the stream, we will get it at our submerged dam.

How long it will take to drain out, of course, is a question; but we know to a certainty that the water we spread over forty or fifty acres of ground to a depth of 3 or 4 feet to-day, does not run over our dam to-morrow.

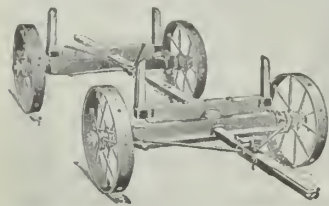
By building embankments 4 feet high to hold water on the ground 4 feet deep, a great deal of water can be kept running on fifty to seventy acres. There is little danger of breaks where the depth of water is not more than 3 or 4 feet, and the ground can be filled with 3 feet of water standing on it as well as with 10 feet. If the ground was a heavy clay or hardpan, the case would be quite different. Then we would have to build deep reservoirs. The idea is, as I see it, to fill the ground, and the greater number of acres the better.

**A CASE IN POINT.**—We all know that during these past dry years the Santa Ana Irrigation Company and the Anaheim and Fullerton companies had large streams of water. Now, why did these companies have so much water? Simply because the people of Riverside, Redlands, Colton, Highlands and other places bordering the Santa Ana river have for years been storing the ground full of water, which has now found its way back to the stream. Fifteen or sixteen years ago the water supply of Anaheim and Santa Ana, after a dry winter, would run down as low as three heads for the two companies. During the summer of 1900 this supply was not lower, I think, than fifteen heads or more.

Large, watertight storage reservoirs are very costly; but water can be put into the ground very cheaply. Hold it back. Spread it over as many acres as possible—the farther from the main creek channel the better. Turn the land into a swamp and let the drainage come slowly to the submerged dam below.



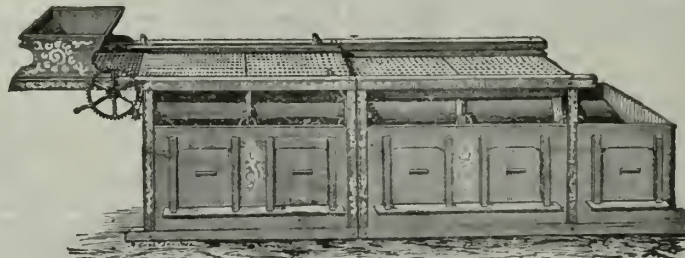
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## CEREAL CROPS.

### The Wheat Growers' Committee and the Strike.

The following report was presented to the wheat growers in convention in Sacramento on September 25th by the committee which visited San Francisco and Port Costa:

To George W. Pearce, chairman of the Farmers' Convention:

Your committee beg leave to report as follows: In accordance with the resolutions passed by your body at your session held at Sacramento on Thursday, September 12, 1901, we visited Port Costa and there interviewed the strikers and warehousemen.

We found the strikers universally anxious to return to work. They stated that there was no dissatisfaction with the wages or employment, but they were restrained by the strike leaders in San Francisco. They claimed that the labor unions of San Francisco had helped them in their successful strike in July for higher wages and shorter hours. They requested this committee to visit the leaders of the Water Front Federation at San Francisco and ascertain if something could not be done to release them from the present strike. We also visited the warehousemen and grain handlers at Port Costa, and found they had about 350 men at work—about one-half the usual number so employed at this season of the year unloading cars and barges and loading ships.

These men are boarded and lodged at the warehouse, on barges, and in temporary structures. They are working under protection of deputy sheriffs of Contra Costa county. We ascertained that there were no men then at work who are boarded and lodged at any of the hotels, and that the assaults that have been committed are preventing their being so entertained or their going out on the street and mingling with the citizens of the town. We are also informed that the hotels refuse to accommodate non-union laborers, but are entertaining men who are out on strike.

Violence and intimidation have seriously interfered with obtaining help necessary to handle the usual amount of grain that should be handled at this time of the year, and the temporary accommodations for men employed are said to be full.

The business of handling this season's crop is in a badly congested state.

We interviewed Sheriff Veale of Contra Costa county, who stated that with proper assistance from the Board of Supervisors he could handle the situation and maintain absolute order, but that up to the present time such assistance has not been granted him; that until such assistance is given him the present state of affairs must continue. He assured your committee that he would deputize any number of reputable citizens of the State who might be sent there to preserve law and order and remove the crops. Unless men are sent the necessary portion of the crop cannot be handled in time to prevent serious loss.

Your committee then visited San Francisco, and at the request of the Port Costa strikers called on Mr. Furuseth, strike manager of the Water Front Federation. We stated to him that we had interviewed the strikers at Port Costa and that they were ready to go to work provided his consent could be obtained. We explained to him the unprotected condition of the crops throughout the State and the fact that they must be moved at once. We told him that the farmers would be glad to have the union men handle their crops if they would, but that unless they did the farmers themselves would be compelled to do the work to prevent serious loss. Mr. Furuseth said he would not consent to that; that he would release no one. He advised us to call on the executive com-

mittee of the Employers' Association of San Francisco and get that body to accede to the demands of the striking teamsters of that city.

We then visited some members of the executive committee of the Employers' Association and were given a full account of the causes leading to the organization of that body, and the work it was doing. We believe the position taken and maintained by that organization to be reasonable and justifiable.

We herewith submit and append to this report a copy of declaration of principles of the Employers' Association, and also a copy of an article of agreement which the strikers demanded the business men of San Francisco to sign. They are submitted for your consideration and comparison. The presentation and demand for the signing of such articles of agreement is one of the causes for the existing labor troubles.

In our opinion the differences between the Employers' Association and the strikers are irreconcilable, and the demands of the strikers are so unreasonable that they cannot and will not be acceded to.

A large number of men who desire to work may find permanent employment at Port Costa at good wages, and we recommend the farmers throughout the State to select and send suitable men there for that purpose.

After thorough investigation and in accordance with the foregoing statement of facts, your committee would recommend that volunteers be sent to Port Costa to preserve the peace that the grain may be handled, and suggests that subscription lists be started to defray the expenses of the men so employed.

Unless such action be taken, it is our opinion that the crops cannot be handled in time to prevent serious loss.

All of which is respectfully submitted.

J. CRAIG,  
WM. BECKMAN,  
J. H. RICE.



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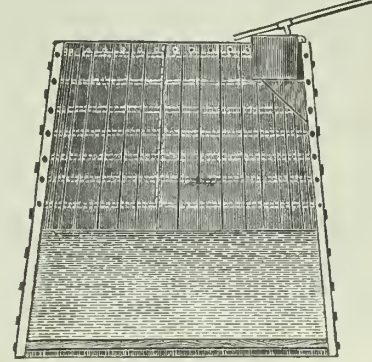
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### Tulare Grange.

TO THE EDITOR:—Tulare Grange convened at its hall on the 21st. After the routine business was through the third and fourth degrees were conferred.

The special committee, appointed at the last meeting, to report on the proposed amendments to the constitution of the State Grange, reported verbally. The members of Tulare Grange favor the continuance of a Lecturer's fund, and deem its abandonment of doubtful expediency. The present date of meeting of the State Grange suits this Grange better than an earlier one would, but we recommend that our representative at the State Grange investigate the reasons for the proposed amendments and vote as in his judgment the good of the Order requires. A resolution to this effect was then passed.

Bro. E. C. Shoemaker was chosen alternate from Tulare Grange to the State Grange.

The subject for the day, being "How Can Our Crops and Farm Products be Marketed to the Best Possible Advantage?" was taken up. The consideration of it very naturally led to a consideration of the strike now kept up at San Francisco. The report of the farmers' committee, sent by the Farmers' Convention at Sacramento on the 12th, was read. All the members of the Grange were emphatic in their condemnation of the sympathetic strike by the grain handlers at Port Costa. They declare that while the grain growers of California are the principal sufferers by the strike the farmers of California, even in the slightest degree, have done nothing to justify it, and as farmers so far as it affects our business and business interests, the strike is unprincipled and criminal.

It was allowed by all that the object of the Sacramento Farmers' Convention—better co-operation among farmers in marketing their crops—was meritorious and laudable, and that object can be better attained by more Granges and Grange members than by any sporadic efforts, such as the present strike calls out.

The October subject is, "What Are the Advantages of a Home Upon the Farm Over the Advantages of a Home Elsewhere?" J. T.

### Notice to Grangers.

You are hereby informed that in order to secure the rates of one fare and a third to the California State Grange meeting and return, that all Patrons coming via Southern Pacific railways must secure their certificate from the local railroad agent when purchasing their tickets for San Francisco, bringing at the same time the certificate furnished by your secretary via the California Northwestern Railway. All certificates must be signed by agent selling ticket, otherwise certificate will not be recognized, and party will be compelled to pay full fare.

You are further notified that a mistake was made in circular sent out, instead of the fourth degree being exemplified, it will be the four degrees.

Mrs. L. S. WOODHAMS-BRASCH,  
Sec'y California State Grange.

### A Necessity.

Concentration and organization are the order of the day. Business methods are rapidly changing. The small tradesman with limited capital and more limited preparation for business is giving way to organized capital with its complete system and efficient labor. Business education is a necessity. The world has no place for the man who is unprepared for business. Efficient men at high salaries are found to be cheaper than poorly prepared men at low salaries. The modern business college furnishes the only means for securing this necessary preparation. The Gas City Business College of Stockton, whose advertisement is found in another column, is one of the best equipped schools on the coast for giving a practical commercial education. The proprietors, Messrs. Humphreys & Wolfenbarger, are both young men of ability with twentieth century ideas. It will be to your advantage to consult them before taking a college course.

GOOD RECORD AT FRUIT PICKING.—Tulare Register: Some young men were picking peaches out at M. C. Sipple's one

day recently and were not making as good a record as Mrs. Sipple thought they might if they knew better how to do the work, so she took hold and gave them an object-lesson. The picking was good and the peaches large, and she made a record of twenty boxes in an hour, at the end of which time she thought she had shown them sufficient and knocked off work. As Mrs. Sipple is 55 years of age, the record is not a bad one.

THIS YEAR'S YIELD.—The Ojai, Nordhoff: From the best information obtainable in Ventura county, the crop of lima beans will reach 500,000 sacks, and about 40,000 sacks of black eye beans. They weigh eighty pounds to the sack and many crops are already contracted for at 4 cents per pound. The Del Norte rancho, owned by L. Schlappa Pietra, has 5000 acres of beans. Dixie Thompson has 1700 acres of beans. There were 350,000 sacks of barley and wheat raised in Ventura county this year. The English walnut crop is larger, earlier and of better quality than last year. It is estimated at 100 carloads. There were 800 tons of dried apricots cured this year, the crop going far ahead of early estimates. Several individuals in the county have each five or six carloads for sale, and the prices offered, 8 and 9 cents, are better than last year. The apiaries of Ventura county will this year produce twenty-five to thirty carloads of extracted honey. The largest individual producer is Mr. Mercer, who will have forty tons. The estimate for the crop of prunes now on the trees, 600 tons, breaks the record for Ventura. The almond crop in the Ojai valley is fair.

### STATE OF OHIO, CITY OF TOLEDO, ss. LUCAS COUNTY,

FRANK J. CHENEY makes oath that he is senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

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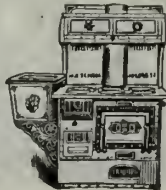
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- 682,378.—WATER ELEVATOR—J. E. Armstrong, Santa Cruz, Cal.  
682,593.—GATE—D. Bashore, Walla Walla, Wash.  
682,233.—METALLIC OXIDES—C. A. Beck, Good-springs, Nev.  
682,452.—RULER—A. H. Buhner, S. F.  
682,528.—ORE SAMPLER—A. C. Calkins, Los Angeles, Cal.  
682,520.—BLOWPIPE—A. C. Calkins, Los Angeles, Cal.  
682,317.—DENTAL ENGINE—M. N. Callender, S. F.  
682,176.—CAR VENTILATION—W. T. Cottier, Portland, Or.  
682,179.—HASP LOCK—I. C. Drake, Orting, Wash.  
682,180.—WELL CASING—Eastwood & Hoagland, S. F.  
682,325.—FOOT REST—J. C. Garrett, S. F.  
682,463.—FIRE POT—J. W. Green, Portland, Or.  
682,353.—TREADLE—W. T. Gordon, Juniper, Or.  
682,383.—LIQUID BALANCE—J. W. Gray, Oakland, Cal.  
682,590.—LAWN SPRINKLER—T. J. Greer, St. Helena, Cal.  
682,253.—CAR COUPLING—G. C. Harlin, Stockton, Cal.  
682,592.—FURNACES—A. Heberer, Berkeley, Cal.  
682,478.—RUDDER—J. Marolf, Tillamook, Or.  
682,478.—DUST EXCLUDER—J. P. Martin, Ely, Nev.  
682,384.—WRENCH—J. D. McFarland Jr., S. F.  
682,385.—EXPLOSIVE ENGINE—J. D. McFarland Jr., S. F.  
682,490.—LEDGER—A. E. Partridge, Seattle, Wash.  
682,493.—CARRYING CASE—R. E. Pendleton, Red Bluff, Cal.  
682,573.—VENDING MACHINE—B. W. Scott, San Jose, Cal.  
682,594.—MUSICAL INSTRUMENT—E. Striefler, Bisbee, Ariz.  
682,515.—FLOW—A. B. Strong, Perrydale, Or.  
682,291.—MIXING MACHINE—W. Sukalle, Santa Rosa, Cal.  
682,371.—CONCENTRATOR—H. P. Taylor, Hailey, Idaho.  
682,577.—HOSE COUPLING—C. A. Tripp, Los Angeles, Cal.  
682,376.—HANK—W. Wood, Banta, Cal.  
35,056.—DESIGN—Tuckey & Kilne, S. F.

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## THE FIELD.

### The Hop Crop.

W. E. Lovdal of Sacramento, secretary of the State Hop Growers' Association, has issued a circular to the hop growers of California warning them against accepting present prices for their crops, and giving reasons for holding for better figures. Mr. Lovdal says:

"Although a few sales of hops have been made at ridiculously low prices, it can be said that the market has not fairly opened, and there are several reasons for this.

"First, the freight rate which is now 2 cents per pound, as against 1½ cents last year. This the merchants and dealers are trying to have changed back to the old rate, and are, therefore, withholding their orders to a certain extent, so as to save this half cent difference.

"Secondly, on account of the high freight rate, many of the dealers have been filling their orders with hops grown in New York State.

"Thirdly, brewers and most merchants are under the impression that there is going to be a large surplus this year, and conclude that hops must go lower. But as a matter of fact, when you look into it, you find that there is not a bale of hops of any kind (other than the 1901 crop) in the hands of growers, so the new crop will not be hampered by old stocks now, and the brewing industry must depend for one year on the crop of 1901.

"Let us see what this year's crop will amount to, and what the requirements are. It was thought that Washington and Oregon were going to have an exceedingly large crop of hops, but it is now known that the crop is coming down very light, and early estimates will not be realized by a long way.

"It is said that Oregon will not harvest over 60,000 bales, against 84,000 last year, making a difference of 24,000 bales for Oregon alone. Washington will have under 30,000 bales, and possibly only 25,000. This makes a shortage for Oregon and Washington of at least 29,000 bales, and possibly 34,000 bales. This shortage is nearly as much as California produced last year, being but 2000 bales less. California will lose many bales in Sonoma and Mendocino counties from overripeness, and many acres will be left unpicked, so that California will harvest only about 45,000 bales. Therefore, the Pacific coast will harvest at most 135,000 bales, with a probability of only 130,000 bales, against 151,000 bales in 1900, or from 16,000 to 21,000 bales less. New York State will grow about the same as last year, or a little less, say 55,000 bales. This makes for the United States about 190,000 bales, to which must be added about 5000 bales imported from foreign countries, making a total in the United States of 195,000 bales.

"The brewing business has increased to such an extent that it is now conceded that at least 200,000 bales are necessary to satisfy the requirements

of brewers in the United States for one year.

"We export annually to foreign countries from 60,000 to 80,000 bales. Say that we ship only 30,000 bales this year, we find that the United States will have only 165,000 bales for its home consumption. This will make us 35,000 bales short of requirements.

"When we have only to meet requirements, hops usually average from 12½ to 15 cents. Now, when we are 35,000 bales short of requirements, what prices should we expect?

"England has a fairly good crop this year, but not enough for her requirements, and latest reports are to the effect that many yards are falling off from overripeness, and will remain unpicked. England always carries in reserve about 80,000 bales. This she must get from America, as Germany has about 25% shortage this year, and will not have many to export. Furthermore, American hops are cheaper and on account of good quality are always in demand.

"So the world will not produce enough hops in 1901 to supply the world's requirements for 1901. Then why should hops go begging at 10 cents to-day? Growers felt that they should get 15 cents this year, and did not care to make contracts at 11 cents, so there were fewer contracts in 1901 than ever before.

"The hop merchants, in order to keep their trade, met competition, and sold short at low prices, and are now bearing the market in order to buy sufficient hops to secure themselves. They know that some growers can be induced to believe that the hop crop is large, and the price necessarily low. They also know that while they cannot induce all growers to sell at low prices at this time, they may be able to do so later by securing sufficient goods to meet the temporary demands, and finally compel those who are waiting to come to their terms, and thus enable them to cover their short sales without loss.

"On account of the hop crop being light in Oregon the growers are holding for higher prices, and dealers, realizing that they cannot secure hops in that section to fill their orders, are endeavoring to do so in California.

"Growers should not force their hops on the market, but store them away until they can get their prices. The buyer must come to you sooner or later. The position is in your hands if you could but realize it."

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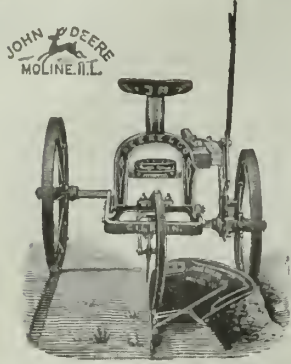
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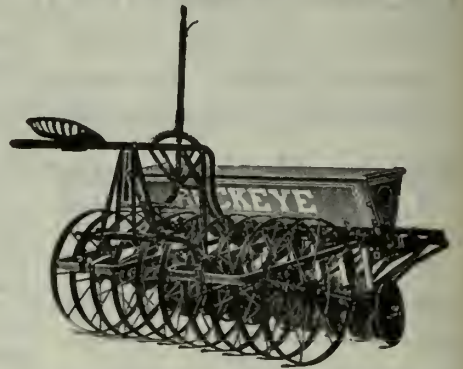
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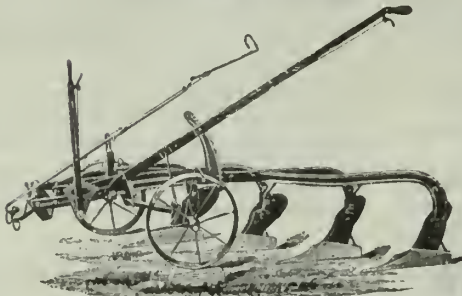
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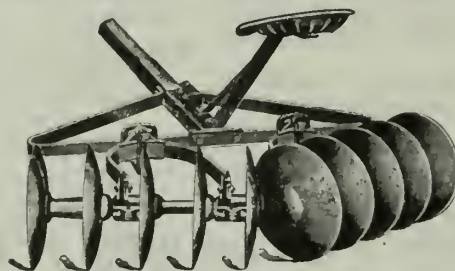
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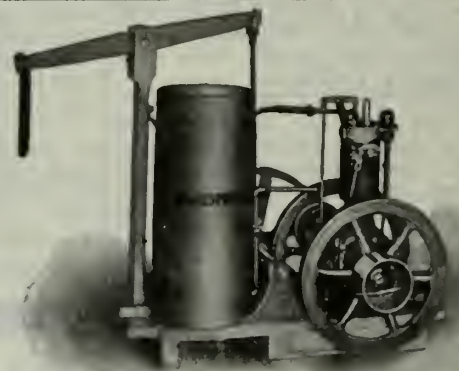
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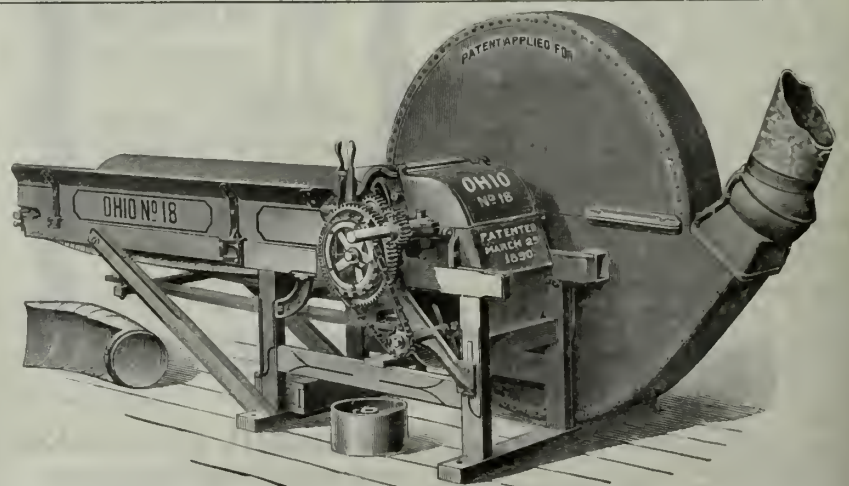
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## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 14.

SAN FRANCISCO, SATURDAY, OCTOBER 5, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Activity in Angoras.

We take the occasion of the annual meeting of the Goat Breeders' Association of California, the official report of which appears upon another page, to allude to the wonderful activity which now prevails in Angora affairs. We have previously pointed to the arising and progress of this new wave of interest, for it has been gathering force for the last two or three years, but it has now reached a depth and width of popularity which even the most hopeful did not anticipate. The Angora goat is now being advocated on a broader ground than hitherto and is now attracting attention in nearly all the climates of the United States. It is, of course, possible that anticipations will outreach any point which can be realized, but the future must demonstrate that. So far as the Pacific slope is concerned, there seems no question as to the safety of the goat enterprise so far as it relates to climatic conditions. We have had disappointments with goats in the past, but they have been due chiefly to the changes in fashion in fabrics or to lack of proper effort to bring the hair up to the characters demanded by the manufacturers. Some money has been lost by those who did not press on to the highest quality, but in contrast with such losses are notable gains by other breeders who have kept up their flocks, improved their product and are now profiting by the improved condition in which the goat industry finds itself.

The wide popularity of the goat is reflected in the multiplicity of publications. In addition to the publication which Colonel Bailey refers to in his address on another page of this issue, there has just appeared a Farmers' Bulletin on the same subject which can be had on application to Congressmen. In the September number of the Bulletin of the National Association of Wool Manufacturers, Mr. S. N. D. North gives an interesting review of recent Angora literature. We have known Mr. North for the last thirty years as a leading writer on textile affairs and look upon his interest in Angora affairs as an exponent of their advance in popular estimation. Mr. North cites the consumption of mohair in the United States in 1899: 1,077,000 pounds domestic and 1,119,465 imported, and compares them with the figures of Col. Black, a Texas writer, who

estimates the number of Angora goats in the United States on January 1, 1901, at 329,300, and their clip at 876,450 pounds. Of this total the largest number, 100,000, are assigned by Col. Black to Texas, with a product of 250,000 pounds. This is a weight of two and a half pounds per fleece as against a weight of three pounds for the Oregon and California fleeces, in which States there are reckoned to be 75,000 and 40,000 Angoras respectively. Iowa is credited with 40,000, New Mexico with 30,000, and Arizona with 10,000, and no other State with more than 5000. The States above named are those in which it is to be expected that the development of this industry will chiefly occur. Col. Black believes that, all things considered, Texas is the most promising region, although he concedes the obvious advantages of Oregon and California in soil and climate.

Recurring to the question of the probable future demand for mohair fiber in the United States, the ground for encouragement is not great. According to the eleventh census, 2,136,244 pounds of mohair were manufactured in this country in 1890, a quantity almost identical with that reported above as consumed in 1900. The use of the fiber, here and elsewhere, is subject to no regular rate of increase, but fluctuates widely from year to year according to the demands of fashion, the total available supply being but little more to-day than a quarter of a century ago, yet sufficient for all the manufacturing requirements.

Those who doubt the opportunity of largely increasing the mohair product are advocating the multiplication of Angoras as land clearers and for their product of milk and meat, claiming that an incalculable area of brush-burdened land can be rendered valuable by these animals. No doubt there is something in that, but we still believe that the production of a superior mohair is the chief object to aim at. Such mohair can only be produced by very high



Angoras Which Came From Turkey to California by "Underground Railway."

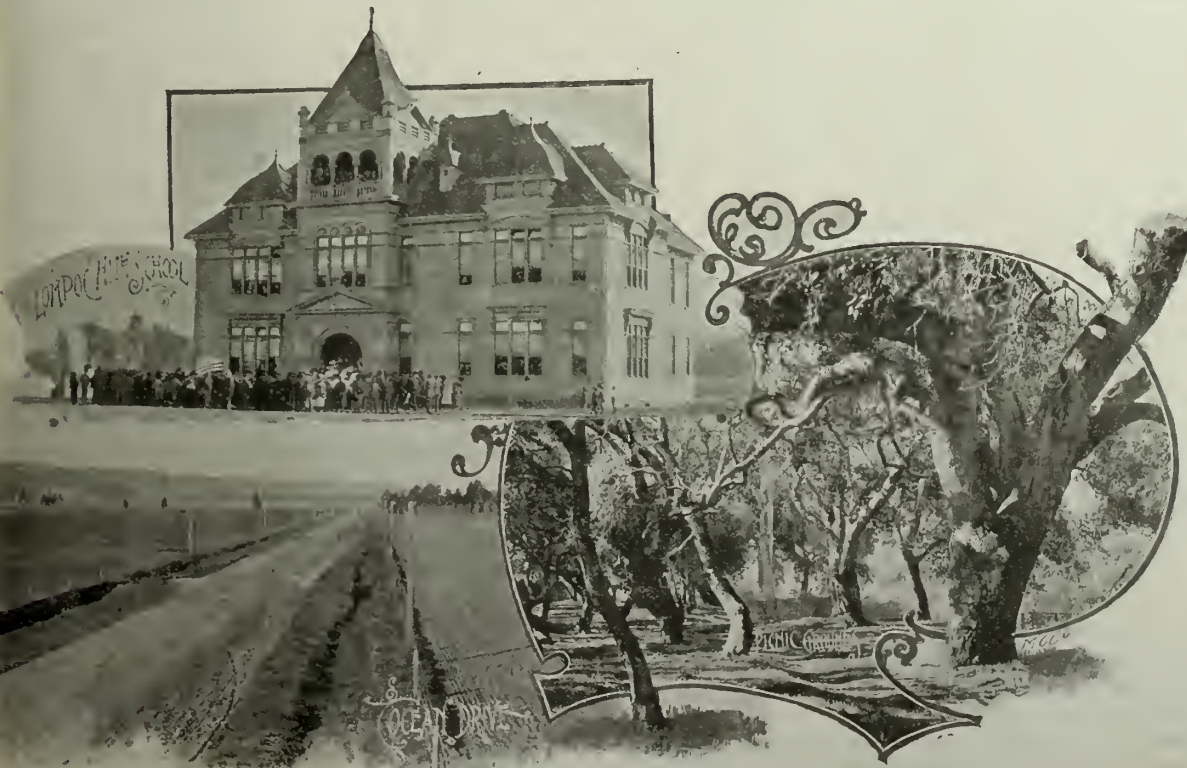
grade goats. Californians are entitled to credit for their enterprise in securing the best goats from their inaccessible native country and bringing them out of the country against the utmost precaution of the Turks to prevent it. The smaller engraving on this page shows the buck and doe, "Beibozar and Moholitch," held by a Turkish guide, while a photo was taken by Dr. W. C. Bailey on the mountains of Asia Minor last March. In view of the portrait it is interesting to recite the hardships which these pretty animals had to undergo in order to enjoy a life in California.

To escape the watchfulness of the Turks they endured a ride on mule back, then on camels, a trip in a closed carriage, then were tightly packed in a sack and carried for miles on a man's back; next they had a hay ride on the Bosphorus (under a boatload of loose hay). They had to be shorn in cold weather and run through coal dust, only to look a death ax in the face, but were saved by a golden wand; again, through the streets of the Oriental capital in an open wagon, but looking more like dead animals than live ones, even then to be stopped three times by customs officials and police, and as many times passed by that wonderful bakschiesh from an invisible hand—they thus escaped the Ottoman empire, but had still the long and tiresome trip by sea and land to California. It is fortunate that they endured it all and begun their California life in the Bailey flocks under favorable auspices.

### Southern Coast Scenes.

The adjacent cluster of scenes is illustrative of natural and added charms in the southern coast region of California. The substantial school building is typical of what our people are doing for educational progress in all parts of the State. We doubt if any State expends money more freely and cheerfully for school purposes than California. Long before the mansion or villa is thought of in new settlements the fine school building is provided for, and it often stands in marked contrast with the cottages which merely dot the landscape in which it is a prominent figure. California shows her faith in education by her works, and in fit responsiveness education is building up California in a remarkable way. The lower views of the group are characteristic of the region. The well-graded ocean drive and the grove of oaks are charming features which many of our coast towns delight in.

The largest bull at the Pan-American is a Short-horn that weighs 2750 pounds. The smallest full-grown animal is a French-Canadian cow, and she weighs less than 400. Between these extremes are all sizes, but only one quality, and that is the best and most valuable that the continent affords.



Group of Scenes in Santa Barbara, Cal.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, October 5, 1901.

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## The Week.

Melting weather continues. The skies are drooping and moisture seems to distil from almost any sort of a cloud. This is a popular sign of a wet season and is welcomed by all except those who have valuable products still out of cover. Snow on the mountains is also significant of water and the Weather Bureau will do well to get its California snowfall bulletins into shape early this year. Fortunately, these signs of a wet year are appearing thus far where they can do least harm, for all except the mountain snows are most abundant in the bay region, where the chief harvest this month will be yellow-legged chickens for the Bishops' convention, and not susceptible to injury by showers. With the promise of a moist year the season opens well, and it is fair to anticipate a winter's activity in all lines of production, trade and development such as the State has not known for years. The strike is declared off.

Wheat sympathizes with the weather and is called sloppy by the experts. Futures are slightly off, though spot wheat is unchanged. Shippers are turning the strike to their best advantage in cheapening wheat. Meantime barley is active as ever and is going out of the harbor at a good rate; 11,000 tons of barley cleared this week against 7600 tons of wheat. Rather an interesting fact is a shipment of barley purchased for ship owners' account. This is rather rare and we can stand more of it. Oats are quiet, but not lower. Seed oats are in request and are bringing good figures. Some corn is coming in—some of domestic growth, but chiefly Eastern. Prices are unchanged. Beans are unsettled and new are arriving. Large white are most abundant and are a little weak. Small whites and pea beans are scant and few Limas are coming, for which prices are not yet fixed. There is an easier feeling in bran, and as mills are running supplies are increasing, but the market does not change yet. Hay is unchanged. Receipts are freer and hay is moving well—the best being firm. Beef and mutton are unchanged: calves are in freer supply and hogs have crowded the packers so that they are refusing them, but this condition will not last long. Fancy fresh butter is up again and the market moderately firm, which is helping supplies out of storage. The increase in the calf supply and the promise of green feed is taken by the prophets to indicate increased milk flow and an early fresh-butter season. Cheese is holding up well both here and at the East. Eggs are again in the same shape as butter, as to the high price for fancy

and quicker movement from cold storage. Poultry is a little better, with the advantage on the side of fine large stock of all kinds and ages. Potatoes are dragging. Dealers are said to have bought too freely at high prices, and find their Eastern outlet choked by supplies from Oregon and Colorado. Onions are moderately firm, and though not much is doing, quotations are slightly higher. Wine grapes are stiff, but table grapes are in lower condition. New dried prunes are said to be cut slightly by some dealers. Dried peaches and apples are temporarily weak, as the Eastern market is less active. The Raisin Growers' Association is protecting itself by a low price schedule, of which particulars are given in our market review. New Navel oranges are in from Arcadia, Los Angeles county—apparently for the sake of the record. Lemons are still unresponsive to the still higher price of limes. Almonds are quiet and steady, with about half the crop said to be sold. Association walnuts are going East and a few new chestnuts are in from Stockton district. Hops are still wide open and no accord between growers and dealers. Some defective hops have sold low. Honey is still held and buyers are slow. Wool is steady with a good demand for choice fall and little offering.

The convention of wheat growers in Sacramento, which was in progress as our last issue went to press, did not realize all that was expected of it, though we believe the movement resulting in the meeting had a good effect upon the promotion of wheat handling at Port Costa. The convention was less largely attended than expected and the report of 240 present was an error arising that ten votes were accorded to each county and these votes could be cast by a small delegation. It was shown that the situation at Port Costa was less grievous than was reported, and that work was going on, though not as rapidly as desired. This seems to be the present condition, with a tendency continually toward better work. The proposition, then, for the farmers going in person to push the work does not seem now likely to be put into practice. The discussion of a general co-operative association of wheat growers was very wide and various, and seemed to lack force and point. A committee was, however, appointed to work for organization and something may come of it later, though owing to the small attendance at the meeting the undertaking has not a large backing.

The Prune Association seems to be still struggling with the question: to be or not to be. The organizers have taken the field and are making a canvass in support of a receivership, while the directors of the Association are trying to build up a record for good works. On Saturday they ordered a dividend of \$200,000 apportioned to members. This is the fifth dividend declared, making a total of \$1,562,000 paid to the growers. Of the 128,000,000 pounds received by the Association 28,000,000 remain on hand. The stock on hand is large sizes, and disposed of at the present figure will net the growers nearly as much as those already sold, giving the growers a total of \$3,000,000 from the Association product of last year. On Monday the Association began to transfer its prunes from the warehouses of the packers to their own. On the other hand the disorganizers claim that their committee could sell the fruit at less cost, for they claim that the affairs could be easily settled within the limit named, six months, and would be less expensive than with the complex machinery of the Association. And so it goes. We still hope that enough of the Association may remain to serve as a rallying point for later efforts at general organization.

For a concern which can already read its epitaph on the doors of the disintegrating committee, the Prune Association is a very lively affair. After the divorce of the Association with the packers' company the latter announces that it will weigh and deliver to the Growers' Association at once all the prunes in its warehouses. President Woods of the Association has appointed a number of large firms and brokers over the country as agents to sell its fruit, and announces that it will at once enter actively into competition for business. Officers of the California Packers' Company say a powerful syndicate of packers will be organized in the State to engage in

the fruit business. This looks as though we had a united packing interest and a divided growers' interest. That has been the cause of our troubles all along. The trade stands together; the growers stand apart. When will they know better?

The early rains may close down the grape season sooner than would be desirable, for, under dry skies, this fruit would help to lessen the deficiency which will be shown in the total of this year's shipments. Grapes now form the bulk of the fruit now being shipped. Tuesday 17 carloads of fruit were shipped in the following order: Peaches, 3½; pears, 5½; grapes, 10; quinces, 1. The apple crop is, of course, still to come, and that may help out the total considerably.

Sacramento is doing enterprising things to relieve the autumn quiet. The Board of Directors of the Sacramento Driving Club have signed a contract the State Agricultural Park on Nov. 28th. This is with the owner of Cresceus to drive against time at the wonderful trotter an outline of whose record-breaking work was recently given in our columns.

Interesting notes of the walnut crop come by telegraph from Los Angeles. The first shipment of this year's crop of walnuts was made here a day or two ago, and consisted of one car from Capistrano. The Walnut Growers' Association estimated the crop at 550 cars for the State. Of that amount about 400 carloads will be handled by the Association. The walnut crop is fully a week earlier this year. It is of fine quality, and in quantity is reckoned a full crop. Local orchards have a thrifty appearance. Sales have been made subject to confirmation of prices, these being half a cent below the ruling rates last year, No. 1 softshells being sold for 9½ cents, No. 1 hardshells for 9 cents, and seconds of both varieties being quoted 2 cents below these figures. Some complaint has been made this season of blight and red spider, but it now appears neither did much damage.

We have often urged attention to the fact that we do not make use of our winter growing season for field crops as widely as we profitably can. The advantage of winter growth of cereals has been learned by hard knocks of experience, but we do not know how many plants will grow well with the same temperatures which favor the growth of wheat and barley. In the growth of sugar beets this has been pointed out, and we are glad to learn from the Chino Champion that the American Beet Sugar Co. has now decided to commence beet planting for the next campaign about the middle of the coming December, and will plant continuously from that date to and through the usual planting season. It is expected to open the factory next year the first of June on the early beets, and so continue a campaign of probably five months in duration. To do this will require an acreage of 10,000 to 12,000. The company has already satisfied itself that this acreage can be easily procured, and the contracting will commence soon. The representative of the company at Anaheim reports that contracts for 5000 acres can be made at that place. At Compton 3000 to 4000 acres can be had. At Ethanac, in Riverside county, the Chase Nursery Company wants to contract for 1000 acres, and the owners of a large tract of land near San Fernando are anxious to plant it to beets for this factory. A considerable acreage of early planting can also be had at Indio. Then there will probably be 2000 or 3000 acres, at least, grown on the Chino ranch. The sugar company is preparing to farm such of its own land as it is not able to lease. The success of this new system of beet farming will be of very great importance to Chino, for it will mean the lengthening of both the farming and the manufacturing season by about two months, and it will also mean the maintaining in Chino during the entire year of a considerably larger number of skilled factory employes. The progress of the first year's trial of winter growth will be watched with keen interest.

The State Grange is in session this week at Petaluma and a great time is reported by telegraph as we go to press. One hundred and forty delegates answered the roll, all subordinate Granges but eight being represented.



QUERIES AND REPLIES.

Barren Fig Trees.

TO THE EDITOR:—My neighbor has five large fig trees that have not borne much fruit for over two years. The first crop is always light, not enough to get a taste; the second crop is heavy, but they never mature, always dropping before attaining any size. It is fairly cultivated on one side and a few furrows on the other side, the rest a driveway. What do you think is the cause of this behavior and what remedy?—SUBSCRIBER, Sonoma.

As you say the trees are large and have not borne well during recent years the inference is that in former years they did bear well. This would indicate that under favorable conditions the variety is a satisfactory one and that formerly the fruit did not drop. Do the trees show other signs of distress? Are the leaves of good size and do they hold their place and color as late as formerly? If not we should guess that the trees need a good irrigation about the time the second crop of fruit sets. A surface dressing of manure to be leached out by the winter rains would also be desirable. If our inference that the trees formerly bore well is not true; that is, if they have never been satisfactory they may need caprification to enable them to hold their fruit, or they may be of a shy-bearing sort for other reasons than lack of pollination. If so they can only be cured by grafting over with scions from trees which are bearing well in the locality.

Chicken Farming.

TO THE EDITOR:—What is the minimum number of hens with which a beginner should start with to make a fairly good living while he is getting settled? At what price per dozen are laying hens sold? Which would be more profitable—to keep them penned up or to let them range about?—READER, Sonoma.

The number should depend upon how much you know about chickens in California. If you have it all to learn a hundred hens will keep you very busy. If you do everything about right, you may make a dollar per hen. Hen keeping is not a pastime, and it will be hard to make a living out of hens without giving them a good deal of intelligent attention. The price of laying hens depends upon the hens. If you want fairly well bred young hens, you may find them at about \$12 per dozen. You can sometimes get good hens at ordinary market poultry rates, and by selecting the best and using a thoroughbred rooster with them, the increase will be improved. A small flock can be profitably kept in confinement, if everything is kept clean and wholesome; but range and plenty of green stuff and pure water are essential to success in larger undertakings.

The Carob in El Cajon.

TO THE EDITOR:—Please tell me the name of the tree which bears the brown beanlike pods which I send. It has been growing on my place here for many years, being planted by some earlier settler. It has about fifty pounds of these pods on it this year. Are they of any use?—RANCHER, El Cajon.

The tree is a famous one. It is the carob or algaroba. It is sometimes called St. John's Bread, because it is thought to be the "locust" which John the Baptist ate with his honey and not grasshoppers. It is also the "husk" which the prodigal son shared with the swine, and not corn husks, for they had no Indian corn to get husks from. All this means that the plant you have is very widely used as a forage plant in the Mediterranean region, the pods being broken from the trees for the stock. There is some difference in the kinds, because some selection for size of pod and flavor has already been made. The carob was brought to California many years ago and can now be found bearing freely in many places, and being used for stock to some extent. It is growing, to our knowledge, all the way from the bay region to the foothills; but it is not a very rapid proposition as a source of forage, nor does it always fruit.

Would You Plant Figs?

TO THE EDITOR:—I wish to plant ten acres to orchard, and do not wish to make the expensive and fatal mistake of setting the wrong kind of an orchard. I feel safe in asking your advice, as you have had more chances of observation and a wider range of experience than most people. I am quite familiar with orchard raising in Santa Clara county, but am new to this section. I feel sure that peaches would do well here; but, if Smyrna figs are as safe an undertaking and more profitable, then I should prefer

the figs. Will you give me your candid opinion in regard to the advisability of planting an orchard to them? I enjoy the PACIFIC RURAL PRESS.—READER, Stanislaus county.

There seems every reason to think that the Smyrna fig, properly planted with regard to caprification by introduction of the wild fig tree and the fig insect, will be a profitable undertaking in the regions well adapted to the growth and drying of the figs. We should think that your situation and soil would be excellent for this purpose. The production at Fresno, which is very large this year, seems to be a practical demonstration of the matter. We cannot undertake, however, to advise anyone to plant anything, because he must assume for himself all the risks involved. There is probably more risk in this undertaking than there would be in growing first-class canning or drying peaches, the cultivation of which you already understand, and the fruiting and marketing are also plain matters. If we had your question in mind, we should make a trip to George C. Roeding's place at Fresno, see the trees and the product, and form judgment on the basis of that observation.

At Large or Confined?

TO THE EDITOR:—Which is the most profitable way to raise poultry—to keep them in yards of suitable size or to let them run wherever they please?—FRANK PERAZZO, Sonoma.

As we have already stated, poultry can be successfully kept in enclosures if close attention and ample provision for their wants are maintained. Of course, thoroughbreds for breeding purposes have to be largely grown in that way. Freedom of range for fowls not kept for pure breeding is desirable, but the best care as to housing, cleaning and feeding are still essential. Chickens on the go-as-you-please principle are not very profitable, except, perhaps, in small flocks on farms with plenty of wastes to make use of.

Beet Sugar.

TO THE EDITOR:—What is done with beet sugar? My groceryman tells me he does not keep it, and that he does not think any one in town does.—READER, San Joaquin valley.

Beet sugar is freely sold to retailers and they as freely pass it along to their customers. Sometimes retailers repudiate it because there is some prejudice against it. This is misplaced. Perfectly made beet sugar is absolutely identical with sugar from cane. There is sometimes a little odor because of faulty refining, and there may be trouble sometimes in using beet sugar for canning fruits, but the fact is that people are using beet sugar almost everywhere and do not know it; nor is there any particular reason why they should know it.

Pear on Pear.

TO THE EDITOR:—Can the Bartlett pear be successfully grafted on the Duchess pear? We have some Duchess on quince. Can we regraft into Bartlett with prospects of success?—JOHN SWETT & SON, Martinez.

Yes, so far as growth and bearing are concerned; but you will still have, of course, dwarf trees, and it would be a question whether the future results would not be better if you should replant with good young trees and secure a new standard orchard.

A Useful Sedge.

TO THE EDITOR:—Please find enclosed a bunch of grass which has grown in a pretty dry place, and which the stock seem to like. What is it and is it worth growing?—READER, Escondido.

The plant is one of the native sedges of the genus Carex. There are a number of species native to the State, and they are of considerable forage value and undoubtedly serve to maintain stock when other forage is short. Analysis shows them to be not very nutritious as compared with the best grasses, and yet they serve a very good purpose in the way stated.

Butter Worker.

TO THE EDITOR:—Please describe a butter worker in the PACIFIC RURAL PRESS and tell how to make one.—READER, Tulare.

One of the simplest forms of butter workers is a bar of hard wood hinged at one end to an upright, in front of which is the table on which the butter is to be worked. The other end of the bar is rounded into a handle. Working consists in pressing down the lever thus made upon the butter, turning the butter,

pressing again, etc. Better forms have a revolving table so that by turning the lever may be easily pressed down upon new butter surfaces. There are others still better which have been recently devised. In fact, the butter worker can be bought from our dairy supply dealers to better advantage than it can be made at home, usually.

Kissing Bug.

TO THE EDITOR:—I send an insect. Is it a kissing bug?—A. S. KAHN, San Luis Obispo.

It is the same species recently received from Modesto (PACIFIC RURAL PRESS, Sept. 7), Menanolestes abdominalis. It is one of the so-called kissing bugs.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending Sept. 30, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Cool, clear weather continued after the rain of last Monday, followed by light showers Sunday. The cool weather was beneficial to grapes, which have not, so far as reports indicate, been seriously injured by the rains. There is no report of damage to grain and hay, and it is not probable that the light rain of yesterday injured these crops. Pasture and late vegetables were considerably benefited by the rains, and in some places the soil was softened sufficiently for seeding summer-fallow. Hops are all gathered and baling is nearly completed in Yuba county. Oranges are in excellent condition. The Sacramento river rose 1 foot at Red Bluff as a result of the rain last Monday.

COAST AND BAY SECTIONS.

The rain of last week caused considerable damage to grapes, grain and hay in some of the northern counties, but crops were not materially injured in the central and southern counties. At Peachland the rainfall up to the 26th was 1.28 inch, and grapes were cracking badly. Dried fruits and raisins were mostly under cover before the rain. Grape picking is progressing rapidly. Exceptionally fine apples are being marketed in Humboldt county, and the yield is abundant in all the northern districts. Prunes and grapes are light stocks in the vicinity of Calistoga, but prunes are of large size. Hop picking is completed in Sonoma county. Beans and sugar beets are yielding good crops. Grain threshing and hay baling will not be completed for several weeks in San Benito county.

SAN JOAQUIN VALLEY.

Light rain fell generally over the valley Sunday night and Monday, but the damage to drying fruit was very light. As ample warnings had been given, nearly all of the raisins on the trays had been stacked and the grain was in the warehouses. The remaining portion of the week was cool and somewhat unsettled, greatly retarding raisin drying. A large portion of the first crop is ready for the sweat boxes. A great many grapes are going to the wineries. Peach and prune crops are about all harvested. The sweet potato crop is being harvested. Reports from the mountain region east of Fresno show that 3 or 4 inches of snow fell on Monday, which retarded lumbering. In some portions of the valley plowing and seeding grain are progressing. Feed and water are plentiful, and stock of all kinds are doing well.

SOUTHERN CALIFORNIA.

Cooler weather has prevailed during the week, with heavy fogs along the coast. Grain threshing and hay baling are not yet completed, but progressing rapidly. The hay crop is above average in some sections. Barley is heavy, but of poor quality. Bean harvest is progressing. The sugar beet crop is heavier than usual. Corn is about average. There is a heavy crop of tomatoes, excellent in quality. Potatoes are looking well. Walnut picking is progressing. Citrus fruits are in excellent condition.

LOS ANGELES SUMMARY.—Cool, foggy weather continues. Fruit drying is retarded; some damage. Almond harvest continues; somewhat delayed. Favorable reports of citrus crop. Growing fruits and vegetables are fair.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, October 2, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week	Total Seasonal Rainfall to Date	Total Seasonal Rainfall Last Year to Same Date	Average Seasonal Rainfall to Date	Maximum Temperature for the Week	Minimum Temperature for the Week
Eureka.....	1.94	3.99	1.18	1.68	64	50
Red Bluff.....	.31	1.81	.34	.85	86	48
Sacramento.....	T	.56	.06	.42	80	52
San Francisco.....	.11	.78	.47	.41	72	53
Fresno.....	.49	.57	T	.33	81	46
Independence.....	.34	.67	.83	.34	78	42
San Luis Obispo.....	T	.28	T	.49	88	44
Los Angeles.....	.13	.11	T	.15	80	46
San Diego.....	.01	.06	T	.14	72	56
Yuma.....	.00	.22	.02	.72	98	52



## HORTICULTURE.

### The Olive.

By E. S. THACHER, at the Nordhoff Farmers' Institute.

In laying upon me the defense of the olive, that little oily fruit which has betrayed so many romantic orchardists to disappointment, your committee has given me a task calling for more energy than our sleepy September affords. I shall, therefore, make no attempt to restore the economic reputation of the silvery tree, but shall simply point out that it is, with us, in considerable acreage and in bearing condition, and that we have now to deal with the question, "What shall we do with it?" the time being long gone by for considering whether the planting was likely to be profitable. No one is planting olives now. Many are busying themselves with the problem of securing more frequent and abundant crops, and with the no less important problem of the disposal of the fruit. I have no new light to offer on either of these, but perhaps I may place the subject before you so as to call out some profitable discussion.

A branch of horticulture undertaken with enthusiasm in a region that is new to it is almost sure to go through a period of genuine discouragement, as the unseen difficulties come forward to disappoint sanguine expectations. It is in meeting these difficulties—meeting them hand to hand and working out ways and means to subdue them, or evade them, or to carry them along and secure a profit in spite of them—that the true farmer finds his field. It is just at this period of discouragement that the office horticulturist is apt to drop out. His neat prospectus of light cost and heavy returns is discredited by uncomfortable facts, and he realizes that he has neither heart nor equipment for the continuous struggle with the sly and deceitful fruit tree and the no less treacherous market. So the farmer is left with his problem, and it is time for him to roll up his sleeves.

Throughout a wide fruit growing region, then, the individual orchardists are watching their trees, trying various experiments, variously interpreting results. Among these working experimenters there is here and there one who is specially endowed with progressive ingenuity and clear observation. If he has also courage and patience, such a man is likely to discover something now and then which may be of importance, and the contributions of a number of such men, gathered and distributed by neighborly intercourse, by agricultural papers, or by Farmers' Institutes, may carry the doubtful industry forward to a sound economic condition, save it from abandonment, from the loss of the years of expense and waiting.

As a rosy speculation the industry fails, sinks into hopeless discouragement. Then comes the opportunity of the sober, detailed effort of the worker who keeps expectancy a little in the rear, of the man who prefers doing a small thing to talking of a large one. And by and by, perhaps, the speculator who has dropped the enterprise as a hopeless fad, and hurried off to other fields, finds that this thing is being done, after all, and that numerous households, or even communities, are thriving on its moderate returns.

It is my hope, for the olive, that we are entering on such a period of sobriety. We certainly have been for some time in the purgatorial period of discouragement.

**THE MOISTURE QUESTION.**—As to methods of increasing the regular production of olives, I hope Prof. Cook may have valuable suggestions gathered among the experiences of our neighboring counties. As to our immediate location, I am inclined to believe that we are more exposed than are the regions nearer the sea, or of less altitude, to loss of crop by sudden changes of temperature in the time of bloom or of setting of the fruit. We may set off against this our comparative freedom from black scale, and may decide to prefer the increased uncertainty to smutty fruit. It nevertheless is important to discover any means that may exist to diminish this uncertainty. It may be that if trees were kept continuously in good heart by a sufficiency of moisture throughout the year they will have a vigor that will carry their blooming operations safely through trials that would be too severe for trees in feeble condition, and that our problem, as regards bloom or setting, is simply referred back to the water supply in the ground. If so, our difficulty may seem almost hopeless, since the present prospect of profit from olives does not warrant the bestowal upon them of any considerable share of our precious and scanty water supply. It would be an excellent thing if we could give our olive orchards one thorough irrigation, somewhere between July 15 and August 15. If we cannot do that, there remains one thing that can be done, and that is to maintain a reasonable ratio between the moisture in the ground and the draft made by the trees.

It is common observation that, when moisture is scant, in well cultivated orchards it is the young trees that may still produce olives of fair size. The larger trees, drawing out the water with great rapidity and in large volume, exhaust the available supply before July is over, the olives stop growing,

the leaves turn light green or yellow, and the trees give up the fight for the season. As our trees grow older this condition must become increasingly manifest, if they are allowed to grow larger, according to their nature, until it will be only in exceptional years that any good-sized olives will be found in our orchards.

Do they not, then, point us clearly to the only alternative? They must not be allowed to grow larger. If we can supply, without irrigation, moisture enough to well support small trees, we must insist on having small trees, and must prune continually with that end in view.

This brings us to face a heavy item of expense, but I believe it to be an inevitable item. It is just a case of what must occur in every business, that possible success is continually being shut off by these barriers of necessary expense, and to shrink from the barrier is simply to give up the undertaking.

**WHO WILL BUY?**—Leaving this one suggestion, in the hope that it may provoke discussion, I pass on to our situation in the present season, when we find ourselves facing a probable crop of several hundred tons of olives and a probable shyness on the part of buyers. We have waited long for these olives. We don't want to throw them away, nor can we be quite content if they serve only to give employment to a considerable number of pickers, leaving the growers little or nothing for the work and cost of a series of years.

If any certain low price per ton were fixed for our crop, leaving a margin over cost of picking, it would, of course, be important to reduce by all possible means this cost of picking, and I think we have had little opportunity in the past to realize that the picking of olives rapidly is a trick that has to be learned just as much, for instance, as the packing of oranges. A skilled picker can make good wages at a rate per day for a new hand, and, with the lowered prices for olives, it is inevitable that the rate for picking be set at such a point that high wages will depend on activity and skill. In a recent excursion among olive growers up the coast I found that  $\frac{1}{2}$  cent per pound, or \$10 per ton, was held a full price for picking, while some contracts were taken at \$7 or \$8 per ton. To make wages at these prices, or even at prices slightly higher, it is important to use the most convenient arrangement possible of basket or bucket, leaving the arms and hands unhindered, and the eyes also. I have seen men picking olives by the pound in this valley with absurdly inconvenient provision, in some cases cutting in half, I should think, the possible amount of the day's picking. One man would hold a bucket in one hand and pick with the other. Another would set his bucket on the ground, stooping down to unload every handful.

I have not lost hope that American ingenuity will discover some contrivance to supersede simple manual picking. A small wooden rake has sometimes been tried, but the slight experience I have with it leaves the fingers still in the lead.

**PICKLING.**—It would be useless for me to make any exhibit here of the various methods of pickling. They have all been clearly set forth in University bulletins and other papers, and various members of our community have demonstrated their ability to produce an excellent article. The present chief difficulty is in the market, and that difficulty can only be overcome gradually, by a slow extension of the demand. Of course, such extension must rest on great care on the producer's part to secure good keeping quality. The loss of olives by spoiling in wholesalers' hands has been a most effective check to the development of any large trade in California olives. It is natural that when a dealer has been caught once or twice in this way he should take the position that he "doesn't have to" handle this novelty, and the result is that California olives are hardly handled in a wholesale way, and can only be sold, a barrel or two at a time, in places where a special consumers' demand has grown up. Without knowledge of the figures, I would venture the guess that seven-eighths of the California pickled olives that are eaten are eaten in California. Nevertheless, these olives are so good, intrinsically, and the taste for them is so readily acquired, that there is a sound basis for the hopeful attempt to build up a large market for them.

**OIL MAKING.**—At present the pickle market is only good for small quantities. We have this year a prospect in this vicinity of a crop exceeding, I think, any one crop heretofore harvested by Mr. Cooper, whose product has been sufficient to support his long established trade. Mr. Goodrich of the Quito farm, near Santa Clara, whose reputation as an oil producer is not rivaled by any other except Mr. Cooper, has certainly never handled an amount of olives anywhere near so large as what we have in prospect. Our olives, for the most part, will be small, and only large are saleable as pickles. A considerable part of our crop is of varieties not very well adapted for pickling. The crop, then, must, for the most part, go to oil or be wasted.

The indications are that outside oil makers will not buy this unless at prices pretty close to the cost of pickling. We are, therefore, led up, in spite of an indolent reluctance, to look closely at this business of making and selling oil, since it is likely that we may have to undertake it for ourselves.

I have lately spent some time in inquiries and

observations among prominent oil makers and others who have given attention to the problems involved. The conclusions I have reached are, of course, only preliminary, useful as a basis for actual trial, and I should feel foolish if I were to set them forth before you. It would be testimony at second hand and interpreted by inexperience. I find opinions or preferences so greatly differing, in visiting one man after another, that the operation of choosing among different counsels is necessarily a sort of "jumping at conclusions," complicated by various deflections accomplished in midair. This is sometimes held to be the woman's method of reason, an instinctive performance, often justified by brilliant results. But when I am forced to undertake it I experience a weak-kneed distrust of my qualifications, and am left with nothing more than a feeble hypothesis.

I shall not, therefore, undertake to tell you how to make oil, or how to sell it when made. President Hadley, of Yale, who was a playmate of mine a great many years ago, and who even then astonished all about him by the great range of his knowledge, once protested earnestly against the imputation that he did not know how to swim. He proceeded to explain, clearly and fully, all the attitudes and movements necessary. He admitted that he had never done it, but that was only because he hadn't been in the water. He knew how—he knew exactly how—he knew every principle of physics involved in the art. The rest of us, little every day boys, turned on our heels in loud derision, still finding it exceedingly funny that Arthur should think he knew how to swim.

We understood then—and most of us understand now—that no man knows how to do a thing until he has done it.

I have been, on the whole, somewhat encouraged, by my recent inquiries, as to the prospects of a reasonable profit for oil making, where the business is skilfully and energetically conducted, and only a moderate price paid for the olives. Large profits are secured only by the sale of bottled oil, based on a special reputation and a special demand, which cannot be built up rapidly. Those who have this special trade seem to find a ready market now for all their output, and to be better satisfied with the prospect than they were several years ago. Yet they are apprehensive of falling prices in case of increased production.

Oil can be sold readily in bulk, but at much lower prices, and it is likely that any new producers, if their quantity of product is large, will have to depend on bulk sales for the greater part of it, while working on a special market for a trade in bottled oil.

**ADULTERATION.**—The thorough application of our pure food laws, such as is said to have been accomplished in some of our States, with the laboratory provisions which Prof. Jaffa recommends, would, of course, be of the greatest value to the olive oil producers. Even now we can of course take advantage of the improved conditions in those States by sending our product there. On the general market our bulk sales would be made with the painful knowledge that our precious fluid would, in all probability, be forced into degrading combinations for purposes of deceit. We should be unable to make conditions or to reform the provision trade. We should have to blush now and then, even as the tender-faced bean grower of Mound District Farmers' Club blushes, when he reflects that his pure-souled Lima is made up into spurious coffee, or into a snowy powder for the adulteration of fine sugar.

I was interested to hear from Professor Jaffa of the practice of some of the wholesale grocers who print on some of their mixed salad oils a very inconspicuous statement of their composition. When this practice shall be followed more completely and the printed avowal be made in clearer letters, the business will be on a better basis. For it may very well turn out to be a permanent condition of our market that some combination oils will be knowingly preferred to the unmixed product of the olive. At present we know that most of the so-called olive oil is made of more than one ingredient, unless it is pure cotton seed. If mixed oils are to be the accepted thing olive oil will still be valuable as part of the better compounds. For medicinal use or for several manufacturing processes there will be an independent demand of uncertain volume.

On the whole, my belief is that the production of olive oil is at present a feasible business, whose success, like that of most manufacturing operations, must depend on skill and patience and energy continually applied both to processes and to the work of marketing.

At any rate, these beautiful trees that, through these many years we have tended, are now dangling their multitudinous green pendants before our eyes. Is it only in mockery? When we have led the bride to the altar it is a poor time to turn back.

### Feijoa Sellowiana and Other New Fruits.

By DR. F. FRANCESCHI, Santa Barbara, at the Montecito Farmers' Institute.

Among fruit-bearing trees of recent introduction, a remarkably promising one is Feijoa sellowiana, a native of southern Brazil and Uruguay, which is



known to have withstood uninjured, in France, temperatures as low as 10° Fahr. It belongs to the natural order Myrtaceæ, and is closely related to guavas and eugenias. It is a vigorous growing, bushy evergreen, some 15 to 20 feet high. Its leaves are coriaceous, of oval shape, dark green above and whitish beneath. The flowers are of large size, reddish-purple and showy. The fruits are oval, about 3x2 inches, covered with yellowish-green, somewhat bumpy skin, and are crowned with the persistent calyx, in the same way as the guavas. By those who have tasted them (Dr. Masters of the Gardeners' Chronicle being of the number), the flesh is described as being white, juicy, as mellow as a good pear and partaking of the taste of pineapples, strawberries and guavas. These fruits are so highly perfumed that baskets which have contained them will retain the spicy perfume for a long time.

From what is said above there will be no trouble in finding market for this new fruit which, very likely, may be grown with profit, not only in a few privileged spots of southern California, but also in other parts of our State. If propagating by seed, cuttings or layers will prove too slow, we will have to resort to grafting or budding on some appropriate stock—guavas and eugenias, I venture to suggest.

The strong plants that have been imported from France are going to bloom next year, very likely, and bear fruit. Judging by the rate other trees and plants are growing at Santa Barbara, it will not take long before the feijoa also will be distributed all over California. Indeed, this is the spot where to raise and make trials of new plants.

In the same line of new introductions, I am glad to be able to exhibit before you flowers and fruits of *Aleurites moluccana*, the "candle nut tree," a native of the Moluccas and the Philippines, which has come in bearing when only six years old from seed, and of *Casimiroa edulis*, the "zapote blanco" from Mexico, of about the same age; also flowers of the remarkable *Cas tanospermum australe*, the Moreton Bay chestnut, from the Stevens place at Montecito. Of this species a much older and larger tree has been known to bear several years already at the Stow ranch, near La Patera.

I have also the pleasure of showing specimens of the true *Nephelium litchi*, the "Chinese nut," well known to everybody, but whose introduction was attended with great difficulty; of *Diospyros ebenaster*, the "zapote negro" of the Mexicans, a kind of persimmon of large size and excellent taste which is perfectly black when ripe; and of *Inga feuillei*, the "paca" of Peru, bearing large white pods full of sweet pulp, very popular there. These and many others are growing freely at Santa Barbara, and new introductions of useful and ornamental plants are coming in every day.

## THE ORNITHOLOGIST.

### Desert Birds.

By M. FRENCH GILMAN of Palm Springs, at the University Farmers' Institute at Indio.

By desert birds I mean all that may be seen regularly during part of the year, though, strictly speaking, the term should include only permanent residents and those breeding here but going elsewhere for the winter.

The casual observer would probably say that bird life on this desert, with the exception of half a dozen species, is very scarce and not much is to be seen or learned. But I have counted about 120 species of land birds in the vicinity of Palm Springs, though that place, being nearer the mountains, has a greater variety than in the valley. During the spring and fall migrations the greatest number of species is to be seen, but many are present at any time. Many of the birds nesting on the desert are found elsewhere, while others are confined to this and similar localities. Many birds winter here and go to the high mountains for the summer, while others go to the north—even to Alaska. As I touch upon different groups these points will be noted.

**BIRDS OF PREY.**—We will begin with the hawks and owls and mention with them the eagles and vultures. The California vulture, now nearly extinct, was formerly very numerous. A pair had a nest some twenty years ago near Palm Springs; but it was inaccessible, being on a cliff several hundred feet high and more than perpendicular. I measured a captive vulture—a male—over at Warner's ranch last spring. It, extended wings, measured 10 feet. The female is often more than 12 feet across the wings. The Golden eagle is sometimes seen and breeds in the desert ranges of mountains.

The Red Tail hawk is rather common and its nest can be found on some of the craggy spurs of the foothills. Cooper's hawk, the dark, medium-sized one, that does nearly all the chicken stealing, is found all over the desert, and everywhere else, I guess. It nests in cottonwood or alder trees in all the canyons and is quite prolific—three to five eggs to the nest. I shot eight of them at Palm Springs last month, and all but one had dined on chicken or some game bird. The one exception had a chipmunk, partly eaten.

The pretty little desert sparrowhawk is fairly common and makes its nest in a hollow tree or a hole in the rocks. A somewhat rare bird is the Prairie falcon; but, if rare, it is one of the most interesting. It has slim, pointed wings, a rather short tail, and is probably the swiftest-flying hawk we have. I saw one chase and catch a wild duck in the air once—a widgeon, I think, the duck was. Another I saw once create confusion in a flock of avocets—a kind of large snipe. The hawk pursued the flock, knocked one to the ground and followed it down. At that moment a big Red Tail swooped down and took the game from the captor, who immediately took after the flock again. This time he knocked the snipe into thick brush and failed to get it; so he pursued the flock for the third time and secured his dinner. Other hawks seen occasionally are Swainson's, Sharp-shinned, Zone-tailed and the Marsh and Duck hawks.

Among the owls we have the Western Horned, the Long-eared, the Burrowing and the Barn, or Monkey-faced, owl. These are all familiar and need no comment. I once saw a rather interesting fight between a Barn owl and a Swainson hawk, in which the owl was defeated and completely disabled. I caught him and patched him up and after a few days he took his departure on wing.

**WOODPECKERS.**—The woodpeckers form an interesting family, though we have but few kinds here on the desert. The Red-shafted flicker, western representative of the eastern Yellowhammer, or Golden-winged woodpecker, is the largest and best known. He does not confine himself to trees, but alights on the ground sometimes and eats ants and bugs, digging in the soil with his beak, instead of scratching with claws. Next in size comes the Lewis woodpecker, a shiny greenish-black with pink breast, crimson cheeks and a white collar around his neck. He is a northern bird and his visits here are rare, three being seen at Palm Springs last winter and one shot at Martinez. Two little speckled black and white woodpeckers, with red heads, are among the smallest of the family. I have found their nests in the trunks of the Spanish bayonet, or yucca baccata, and in the large flower stalks of the mesquite yucca. I once shot a Lower California woodpecker at Palm Springs—the St. Lucas woodpecker—and it is said that the Gila woodpecker sometimes strays across the line from Mexico and Arizona.

The Roadrunner needs no description, though perhaps not all of you have seen him in this part of the country. But he is here and makes his large, bulky nest in a cholla cactus, or a mesquite or a palo verde tree.

**QUAIL.**—Three species of quail or partridge are found in parts of the desert—the Valley quail, or California partridge, the Desert quail, or Gambel's partridge, and the Mountain quail, or Plumbed partridge. The Desert quail is the most common in this vicinity, the other two being commoner in the hills and canyons. On the Mesa del Pinyons I have seen the three species drinking from one spring. One or two instances have been known where the species crossed; but it rarely happens, and hybrids are seldom found. Albinos are more often seen, ranging from buff or cream color, spotted with white, or even pure white. The number of eggs in a nest varies. I have found twenty-five in a Valley quail's nest and nineteen in that of the Mountain quail.

The swallow family rather gives us the go-by. Seven varieties of swallows and swifts may be seen during the migrations, but they go elsewhere to reside.

Three humming birds favor us with a sight of their beauty, but only one remains to establish a home under the "Desert Act." The nighthawk may be seen wheeling about in early evening, and, as darkness comes on, his first cousin, the dusky whippoorwill, may be seen, and during the night may be heard expressing his sympathy for the much-abused William. I remember the first nighthawk I ever saw at close quarters. I thought I had found a very large mouth with a small bird attached to it. The bird had a broken wing, and, after I discovered that his "mouth" was much worse than his masticating powers, I took him, or her, perhaps, home, and tried to hatch out some cactus wren's eggs with "it." During the day the bird sat on them all right, but at night the eggs were neglected and were always cold in the morning.

**FLYCATCHERS.**—Nine flycatchers may be seen at various times of the year, and four of them nest here—two of which are migratory. The kingbird, or Arkansas flycatcher, and the Ash-throated flycatcher nest, but leave for the winter, while the other two—Say's Phoebe and the Black Phoebe—stay the year round.

**THE FINCHES.**—The sparrow, or finch, family is well represented: twenty-three species, which I have seen. They were divided as follows: Ten sparrows proper, two of which nest with us—the Lark sparrow and the Sage sparrow; six finches, two nesting here; four Towhees, two nesting here and two in the mountains; two Grosbeaks, none of which make homes with us. One of the Grosbeaks included is a stray and is counted because of the one specimen I saw at Palm Springs in 1897. It is the Rose-breasted Grosbeak, an Eastern bird and very handsome. The other two—the Blue Grosbeak and Black-headed—

are here a short time in the spring, when the latter pays his compliments to our ripe apricots. The gray bird, with black around the beak, that we see around our woodpiles and fences, is Albert's Towhee, and in California is confined to this desert. They pull and scratch up young alfalfa, as one of our Martinez neighbors can testify. The Red-headed linnet or House-finch, or, as some fruit men call him, the "Dam bird," is found everywhere and is into everything in the fruit line. I shot over 1000 of them with a shotgun in a Banning prune orchard two years ago. Another bird which the early apricot men swear at is the handsome Louisiana Tanager, a black and yellow bird with a fiery-red head. They come in the spring when apricots begin to ripen and stay until the crop is picked; then they go to the mountains for the summer.

**ORIOLES.**—The orioles number three species, two of which, the Arizona Hooded and Bullock's oriole, are quite common. The other, Scott's oriole, is more of a Mexican bird and quite rare. It occasionally rests in the desert canyons, in a palm tree or a yucca. I found four young ones in Palm canyon last spring.

**WRENS.**—Six wrens are included among our birds. The largest is the well known Cactus wren, nesting in the cactus or any spiny shrub. The Canyon and the Rock wren are others breeding in this vicinity.

The wood warblers are an interesting race of pretty little birds, but we catch glimpses of them only during the migrations; with one exception, however, as Audubon's warbler spends most of the winter in the valleys and deserts.

Two little gnatcatchers nest in our vicinity—the Western and the Plumbeous gnatcatcher.

**SLEEPING NESTS.**—A most interesting little bird is the Verdin, or Yellow-headed bush-tit. It is but little larger than a hummingbird and has a yellow head and red shoulders, the rest of the plumage being a brownish gray. It builds the oval-shaped nests, with short neck and entrance on one side that we see in the mesquite, palo verde and Daley's thorn trees. A queer fact about the bird is that both male and female build winter nests in which to roost at night, the nests being usually quite close together.

**BLACKBIRDS.**—Four blackbirds visit us occasionally, but do not stay long. They are the Yellow-headed, Brewer's and two varieties of the Redwing. And among them may be mentioned the Dwarf Cowbird, which greatly resembles Brewer's blackbird, but is only about half the size. I shot a partial Albino last week; it was dark-spotted and streaked with cream color.

Of the thrushes there are five, chief of which is the mockingbird, which is now seldom seen here, as compared with its numbers a few years ago.

The robin cheers our grooves all winter, and twice have I seen the Alaska robin, or Varied thrush, on the desert. The Hermit thrush appears during severe winters, and I have seen Townsend's Solitaire thrush two or three times.

The thrashers are four in number, the most common around Martinez and Toros being the Crissal thrasher, while Le Conte's thrasher predominates at Palm Springs and towards Banning. In fact, I have seen Crissal's west of Palm Springs and only four specimens there. Both are resident where found. The Sage thrasher appears during the spring migration, but never in the fall.

The Western and the Azure bluebirds spend the winter with us, but leave for the high mountains and the north in the spring. I had nearly forgotten one of the most beautiful and interesting of all—the Phainopepla. This is the shiny black-crested bird with big white patches on its wings, and may be seen all winter eating mistletoe berries in the tops of the mesquites. It is somewhat related to the Cedar Waxwing, which I include in this list on the strength of a single specimen seen at Palm Springs.

Three vireos may be seen at times, but they are of an obscure greenish-gray tint and hard to identify. The Ruby-crowned kinglet is a winter visitor, as is also the Chat, a fine yellow-breasted singer, but very shy. One vermilion flycatcher, a Mexican bird, has been seen in the vicinity of Palm Springs. This ends my list, by no means complete, as only the more prominent members of each group have received attention.

**CROWS AND JAYS.**—The crow and jay family are represented by the Raven crow, California jay, Pinyon jay and Mountain or Blue-fronted jay. The raven nests on the crags of our mountain spurs and at times becomes quite tame about our ranches. The crow merely comes through our country occasionally. Albinos are sometimes seen, a pure white one being seen for a number of years around Warner ranch, in San Diego county. At Banning a spotted crow (black and white) was noticed for two years. The California jay is common in all our desert canyons, while the Blue-fronted jay is seen only in the higher mountains. The Pinyon jay or Blue crow is a wandering, restless, noisy bird about the size of a jay. It is quite common in all the pinyon districts of the deserts, but seems to change its range occasionally, leaving a locality for two or three years and then returning; possibly their traveling coincides with the pinyon crop, which bears bi-annually.

The Meadow lark is with us some seasons, while the Desert Horned lark is quite common.

The California Shrike is quite common all over the



desert and needs no comment. The Intermediate White-crown sparrow is with us all winter, and quite tame about our doorways, even coming into the houses. The lark Bunting is occasionally seen during the spring migrations. Two water ouzels have been seen in Palm canyon, and they probably nest higher in the mountains.

## SHEEP AND WOOL.

### California Angora Goat Breeders' Meeting.

TO THE EDITOR:—The twentieth annual meeting of the California Angora Goat Breeders' Association was called to order at Sacramento, September 13, 1901, with President C. P. Bailey of San Jose in the chair. After approval of the minutes of the last meeting, the president spoke at length upon the progress of the Angora business in America.

The last year has been an unusually good one for the Angora farmer in California. Throughout the State feed has been good and the goats generally are fat. The weather during kidding season was favorable and farmers raised a large percentage of kids.

There has been quite a demand for Angoras in the Middle West, Missouri, Iowa, Kansas and Illinois, and in some of the New England States. Five years ago probably there were not over 500 Angora goats in Iowa, but to-day there may be 30,000 head. The Eastern farmers have just commenced to learn that the Angora will clean the brush off the farm and allow the blue grass to grow. Cattle do not object to feeding with the goats, so the farmer feeds two lots of animals on the same land. Many farmers have bought goats for brush-land clearers and they have proven very satisfactory workers.

Along the foothills of California several new farmers have bought goats, so that California bids fair to hold her reputation as one of the largest mohair producing States in the Union.

The Government has taken an active interest in informing the American farmer about the Angora goat. Mr. Geo. F. Thompson wrote a very valuable book upon the subject, which the Government printed. The Department of Agriculture at Washington will send this work free upon application.

IMPORTATION FROM TURKEY.—The president reported a large demand for the get of his imported African bucks, and those who had tried them thought well of this strain.

For a number of years goat men and the Government have been trying to get the Sultan to allow new blood to be exported from Turkey to America. The Sultan had absolutely refused to allow any to leave the Ottoman empire. At last Dr. W. C. Bailey has made a trip into the heart of Asia Minor, and he has selected and exported, not without considerable personal risk, four of as fine animals as could be found in the best mohair districts of Turkey. These goats bring the only new blood to America which has come directly from Turkey in over twenty-five years. One of the bucks, Beibazar, is probably one of the finest animals which has ever come to America from any country, and all of the stock is doing well. The bucks are now doing service on one of Mr. Bailey's California ranches. The blood from this importation will be felt in all parts of the United States.

IN MERCED COUNTY.—Mr. Wright, a large stock-raiser of Merced county, said that he owned over 2000 head of Angoras and that his clip averaged between four and five pounds of mohair per head. His goats paid the best interest of any of his live stock. He had tried shearing twice a year, but believed that he received more money and less trouble by shearing once a year. This year he had raised over 100% increase. His goats live principally upon oak brush. In the fall he runs them upon barley stubble. He is arranging for the purchase of a large range near his ranch, and he expects to increase his goat flocks considerably. He was much pleased with the African strains which he has introduced into his herd.

IN SHASTA COUNTY.—Mr. Winmer, who has been in the Angora business in Shasta county for the last twenty-three years, reported that Mr. Bliss, whom he had authorized to get a Turkish buck at a cost not to exceed \$500, while he was visiting Constantinople, had not succeeded in obtaining the animal. He was much interested in the Asia Minor importation and made arrangements for some new blood, as did several of those present.

REGISTRATION.—The matter of registration came before the Association, and some expressed their intention of joining the American Angora Goat Breeders' organization. Some of the members said they would probably take stock to the exhibit at Kansas City in October. Mr. Bailey said he would probably show a carload of fine stock there. Every one present expressed satisfaction with the outlook for the coming year.

ELECTION OF OFFICERS.—The president was re-elected in spite of his protest that he had already been sufficiently honored by the Association and felt that some one else should be given a chance. The result of the election was as follows: President, C. P. Bailey; vice-president, W. W. Wright; treasurer, J. M. Wimmer; secretary, C. E. Bailey.

C. E. BAILEY, Secretary.

1400 N. Fourth St., San Jose, Cal.

## THE POULTRY YARD.

### A Talk on Poultry.

By A. WARREN ROBINSON in the Napa Register.

While there are numerous flocks of poultry in this valley, it must be said that there are very few pure bred fowls. Especially is this to be noted on the farms. This state of things is because the farmer thinks there is little profit in poultry anyway, or that one fowl is to him like any other, whatever the variety may be.

FANCY POULTRY.—The term "fancy poultry" is often erroneously applied to pure bred fowls, in the sense that said fowls are too costly, too well bred for the average poultry keeper to own. But, while the first cost of a well bred fowl may be more than that of the mongrel, it is the greatest economy to own them. In the first place, all the standard varieties represent many years of painstaking breeding, the principal object ever kept in mind being the production of fowls that will lay the greatest number of eggs in a given time. Each breed has its earnest advocates. They have succeeded so well in their efforts that, at the present day, fowls of all varieties—whether they are the more quiet, sluggish Asiatic breeds or the more sprightly Mediterranean birds—have attained an excellence undreamed of fifty or even one hundred years ago.

Certainly the poultry keeper should have fowls in which he can take a pardonable pride—well bred, well kept, carefully tended and sheltered from chilling winds and frosty night air. His main object will be to produce as many eggs as possible, to do which he must have the best fowls obtainable. The very best can now be procured of breeders who make a specialty of the business, at very reasonable prices, considering the time and expense required to breed birds in all their excellence.

BREEDING UP.—If one thinks it too expensive to purchase outright a flock of first-class fowls, he can get a well bred cock, not necessarily one having all the points that go toward the making of a show bird, but one that will be a good breeder, and put him with the common fowls found on so many of our farms. Infuse new blood year by year, and in a short time the flock will be vastly improved.

This is a plea, poorly expressed, for better poultry in our county. There are a score or two of persons who keep pure bred fowls in this vicinity, where there should be hundreds. A good flock, well cared for, is a paying investment. As a side issue on our farms, money is made in keeping fowls. It costs no more to care for the best procurable than it does to raise mongrels—a mixture of all varieties often seen on our farms.

CARE.—Poultry stock should be good and also adapted to the location and the objects of the keeper. Among thoroughbred poultry there is little difference in the different breeds so far as their economical points are concerned, but on the farm a solid, strong breed is best—one that, given a free range during the greater part of the season, will be largely able to take care of itself.

While fowls need good shelter and careful attention, there is little need in our climate of building expensive houses, such as are common and probably necessary in the colder States in the East. Even here in California, one frequently sees poultry houses that have cost far more than need be. We too often pattern after Eastern methods when we build, taking up with the advice some authority there has given, giving no thought to the great difference in the climates of the two localities.

Shelter from winds and storms, freedom from draughts, abundant ventilation—these are some of the principal points one needs to keep in mind when he arranges the buildings in his hen yard. In erecting brooder houses some of us fall into the error of making them too comfortable for the little chicks—too much sunlight, too many windows. There is little provision made for ventilation. The youngsters are often coddled till they become weakened, placed on the direct road to the cemetery, back of the building. There is danger that roup will develop from colds contracted during the cool, damp mornings of early fall. Especially is there need to look after the late chickens. A slight cold often develops into distemper, followed by roup.

OVERFEEDING.—A friend has lost a number of fine hens of late, dying from some unaccountable cause—not all old, weak hens, but young, plump birds as well. In such a case, where there is doubt as to the trouble, upon dissecting the fowl the liver will be found to be diseased. This organ will be of a pale color with numerous white spots scattered over the surface. This trouble is often due to overfeeding. There is danger of this where a hearty mash is fed, either morning or at night. Hens will gorge themselves with this ration, the result often being a disordered stomach and a torpid liver. The better way is to feed the meals, of which the mash is composed, in a dry state. This will obviate all overcrowding of the digestive organs. It is a cheaper method of feeding and will result in a larger egg supply. Best results are obtained when animal food in some shape is used daily, preferably in the shape of meat meal or blood meal.

## THE IRRIGATOR.

### A Valley That Needs Water.

By W. E. WILSIE, at the Nordhoff Farmers' Institute.

It is not my aim to solve the problem of the water supply of this valley, but simply to throw out some hints gained from observation in the nearly fourteen years I have been a resident in this valley.

EVOLUTION.—In the first place, years ago it was thought that the natural rainfall was sufficient for all needs, except in a few favored places where citrus trees would grow, and the water from the canyons would supply this. At that time, as all the fruit shows, fruit was exhibited under a big placard which read as follows: "Grown without irrigation," as though the land where that fruit was grown was the most desirable, for the reason that it would produce crops profitably without having to go to the expense for water. This theory was soon exploded: First, for the reason that the fruit grown on irrigated land was superior; and, second, as the dry years came on, the unirrigated land produced nothing, or very little. Then came the search for water.

SEEKING WATER.—The first theory advanced was that of large storage reservoirs, where the surplus winter rainfall could be saved for summer use. This proved of value only in a few isolated cases where the site chosen was sufficiently flat so that a large quantity could be held back by the construction of a comparatively low dam; but most of our canyons are too steep to be of use for the purpose. The next was to put submerged dams in the canyons and bring the bottom water to the surface. This, too, while it was successful in a small way, did not answer the purpose desired. Then came the theory that we must run tunnels into the mountains, and build canyons with shale that would let large quantities of water out into the valley below. This proved hard on the men who undertook it, for in this valley it was individual effort which in most cases brought the individual to the end of his pocketbook before he had reached the amount of water required to repay him. The next thing was the well, which so far has proved a success. We have proved where our water is; in fact, all the work done has in a measure helped to show this: that our available water is below us, and not above; so we must calculate on raising it, and not on its running to us by gravity.

It has been proved conclusively, I think, that from the number of wells already sunk, water can be reached in paying quantities by sinking; while, on the other hand, it has been proved that it is simply foolish for an individual to tunnel.

A PROPOSITION.—Looking into the formation of this valley, we find lying across the east end and along the north and upper sides of the valley a series of ledges, mostly sandstone, a few of limestone, of different kinds and colors, but all solid. At the east end of the valley this series of ledges is three-fourths of a mile wide. As you go west along the north side, the ledges are covered for one-half mile on the south, while the north quarter is still above the valley. Now it is in this series of ledges that we can find our available water. These ledges are solid and have an incline of perhaps 45% into the mountain, and are in thickness from a few inches to 20 feet or more, and are interlaid with shale—brown, blue and black—in thickness from a few inches to several feet, while behind these ledges is about half a mile of brown shale. All this shale carries water, moving from east to west through the whole series of ledges. It has been demonstrated to be a fact, by the sinking of the Whidden-Double well at the south edge of these ledges to the Sherman Thacher well on the north edge, with the intermediate wells; for water has been struck in all of these wells at from 40 to 100 feet, and has increased with every layer of shale that was passed through. How to reach this water and bring it to the surface is the question.

A PLAN.—Three things must be taken into account in the development of water:

First.—It must be developed above the land where it is to be used.

Second.—The cost of development.

Third.—The expense of raising it.

If I am right in my conclusions, there are but two feasible plans for getting this water: First, by sinking wells at intervals across the whole stratification and putting in pumping plants, and the other, which I think more feasible and far better, to combine the well and the tunnel, sink a shaft as deep as could be conveniently worked, say, 300 feet; drop back 25 feet or more from the bottom, and, by drifting, crosscut these ledges for a half mile into the mountains, and bring the water all to one place by gravity; then put in a plant and raise it to the surface. The cost of the work I roughly estimate at \$25,000. How can it be done? I say: easily by co-operation. Every person in the Ojai is interested in a good water supply. Organize a stock company and incorporate for \$100,000 with a paid up capital of \$10,000; begin operations, and you could easily sell the stock as it would be needed. Sell stock to our home people; everybody would take some; and after the work has progressed far enough to ensure success to the enterprise, outside capital can be had for the asking—yes, without asking.



## Agricultural Review.

### ALAMEDA.

**CANNING SEASON CLOSING.**—Oakland Enquirer: The season's pack of fruit at the California Canneries Co.'s plant at Emeryville is almost finished, although it will be late next month before the last can is stored away. There are at present about 175 hands employed, and peaches form the greater part of the fruit handled, apricots long since having gone out of market. Some string beans and a few other vegetables are also being put up. Most of the fruit is shipped away as fast as it is canned, but there is always some left over and stored until the first of the following year, when it brings good prices if placed on the market at the proper time.

### GLENN.

**LIGHT RAINS NOT LIKELY TO INJURE GRAIN.**—Ex-State Prison Director Edgar J. De Pue, in an interview with the Willows Journal, says: "While it is true that the railroad company has provided warehouses at all important points along its lines, there are many sidings where there are none, and it is at these points where the farmers will suffer. Rain generally falls before the first of October. Half an inch may not result in any injury, for the reason that the sacking absorbs the moisture before it reaches the grain, and, the soil being so dry, no dampness arises. But should the fall of rain be over half an inch, the earth gets soaked and the milddew of the wheat quickly follows."

### KINGS.

**PRETTY PROLIFIC.**—Hanford Sentinel: A. M. Stone, a dairyman of this county, has a cow that has presented him with four calves inside of eleven months, which netted him \$18, to say nothing of her milk.

**RAISIN CROP WILL BE SHORT.**—Lemoore Leader: The bulk of the raisin crop in this county is now on the trays, and the prediction that the crop would be very light is now being duly verified. In some vineyards the crop is only one-third what it was last year. In a few small vineyards, not affected by frost, the crops were as heavy as last year, but such vineyards are few and far between. It is stated on good authority that the raisin crop of Kings county will not be over 60% of what it was last year.

### MADERA.

**TO QUARANTINE AGAINST PHYLLOXERA.**—Hanford Journal: County Horticultural Commissioner Hughes has been requested by the Madera Board of Supervisors to obtain a map of the districts infected with phylloxera in Fresno and to deliver it to the Italian-Swiss winery in Madera, and to ask that company to cancel all contracts for the purchase of grapes in the proscribed area. Unless this should be done a quarantine will be declared against all Fresno grapes.

### MENDOCINO.

**HOP PICKING FINISHED.**—Ukiah Dispatch-Democrat: Hop picking in this valley is now about completed and the many Indians and campers who have been in our midst the past few weeks are gradually returning home. The hop crop will not be as large as first estimated, as the cold, windy days of last spring did some considerable damage. Then, too, the hot weather during the latter part of July and the first of August came at the wrong time and did some injury. Fully \$40,000 has been paid out for picking, however, and the output of the valley will be at least 1,300,000 pounds of dried hops.

### NAPA.

**WINE MAKING IN PROGRESS.**—St. Helena Star: Wine making has commenced in St. Helena and vicinity, but is progressing slowly on account of the scarcity of grapes. In some parts of the valley the crop is better than was expected, but upon the whole it is very short—little more than half a yield. The price seems to have settled down to from \$25 to \$26.50 per ton, the latter figure being really the buying rate. The quality of the grapes is said to be excellent, and the rain thus far has not wrought any injury.

### ORANGE.

**THE OLIVE CROP.**—Santa Ana Blade: Orange county olive growers are disturbed over the fact that this season there are in the neighborhood of 500 tons of olives on the trees in this county, and so far as now known there is no market for half that quantity. In fact there is no sure market at all, for since the death of James Hill of the Los Angeles pickling works, it is not at all certain that the quantity heretofore marketed at that establishment will be needed in the future. So something has to be done and done quickly, or olive growers stand to lose practically the whole of the crop. And this matter is considered so serious that those interested have

decided to make an effort to remedy the existing evil, and to that end the establishment and organization of an Olive Growers' Association has been suggested, the object of which will be to provide a market for the crop. It has been further suggested that a pickle factory be established here at which the olive crop might be taken care of both by pickling the fruit and for the manufacture of oil. To this end a meeting of olive growers was held this afternoon in the office of Judge Victor Montgomery, to consider ways and means to provide for the emergency and to hear any suggestions which might be offered looking to the solution of the difficulty.

### SAN BERNARDINO.

**UPLAND CITRUS ASSOCIATION.**—Ontario Record-Observer: The annual meeting of the Upland Citrus Association was held last Saturday at their packing house at North Ontario. The following board of directors was elected: Jas. L. Paul, president; L. S. Dyar, vice-president; A. P. Harwood, W. T. Leeke, T. F. Mahar. The directors afterward re-elected Chas. D. Adams as secretary and manager. The Upland made a brilliant record the first year of its existence, some four ago, and has never been able to lose the habit then acquired. The first year it shipped forty-four carloads and paid its members \$15,000 for their fruit; the season preceding this one it shipped 152 carloads and paid its members \$77,000; this season it shipped 681 carloads and paid its members, in round numbers, \$250,000 in cash. The record, as compared with last year, shows an increase in membership of over 100% and an increase in shipments of over 300%. Averaging for the whole season, all pools, varieties, grades and sizes of all fruit received, shows an average payment made to members of \$1.60 per 100 pounds or \$1.12 per box, and averaging for the whole season all pools, grades and sizes of all navel received shows an average payment to members of \$1.59½ per 100 pounds or \$1.11½ per box.

### SAN JOAQUIN.

**SUCCESS WITH SUGAR BEETS.**—Lodi Sentinel: Arthur Thornton of New Hope is probably the only farmer in this county who has persisted in sugar-beet raising after the failures which attended the first attempts. This year he has twenty-one acres of beets, which will yield 4000 sacks. He has received reports from the sugar factory regarding his first three shipments, and these reports show that the percentage of saccharine matter was 19.2, 20.5 and 18.8. This is very high. A percentage of 13 or 14 will do, and it is seldom that the factory receives any beets higher than 16 or 17.

### SANTA BARBARA.

**A NEW INDUSTRY.**—Santa Barbara Press: Arthur Verhelle, a Belgian florist of ability and experience, who arrived from Europe with Father Stackman last April, will soon inaugurate a new business in this city, to be known as the Exotic Horticultural Society. The greenhouses will be located on State street, between Micheltorena and Sola. There will be first erected a greenhouse 21x90 feet, and it is intended ultimately to add others to be devoted to the propagation of exotics and orchids. The business will be on a wholesale order.

**WALNUT CURING AND SORTING.**—Santa Barbara Press: Walnut picking is commencing in the Carpinteria section, and a large crop is assured. Prices are also good. Members of the Walnut Growers' Association are erecting quite an elaborate building for the curing and sorting of the nuts. It is built on the side hill with several feet of incline, down which the nuts will roll.

### SANTA CLARA.

**ORCHARD WORK NEARLY ENDED.**—San Jose Mercury: Prune gathering in the vicinity of Moreland is finished, the crop proving smaller than at first supposed. One rancher has only two tons, where last year he harvested fifty tons from the same number of acres.

**NOT READY FOR HEAVY RAIN.**—San Jose Mercury, Sept. 30: The rain yesterday afternoon and last evening, coupled with the general indication for a storm, caused some alarm among ranchers. The barvest of wine grapes is just about to reach its maximum. Heavy and continued rains would most likely do considerable damage. Table grapes are not ready to be harvested yet. The bulk of the table grapes in this valley are grown about Alma and Wrights. These are left on the vine late because when fully matured they contain more sugar. Continued rain would destroy the crop. Since the shower of a week ago ranchers have been making every effort to get their bay under cover. There is not much hay unbled, but there is a great deal of bay in the bale stacked in the fields. If not covered it will suffer damage by a heavy fall of rain, as the top

bales will absorb much water. The fruit people, so far as can be ascertained, are pretty well prepared for a storm. The fruit still on the trays can be protected by stacking the trays, and unless the rains should continue several days should not suffer serious damage. There are still a good many late peaches on the trees. These will not suffer much unless the storm lasts.

### SANTA CRUZ.

**HUCKLEBERRIES IN BIG BASIN.**—Santa Cruz Sentinel: Of the 2500 acres in Big Basin that it is proposed to set aside as a public park, there must be fully 1000 acres of huckleberries. The berries are now ripe.

**FRUIT NOTES.**—Watsonville Pajaronian: Newtown Pippin picking has been commenced in a few orchards, but it will not be active for a week or more.—Shipments of apples to Eastern points the past week were 60 cars—a total of 132 cars for the season.—The cold nights are giving the apples a proper coloring. The weather has been right this summer and fall to insure good keeping apples.—Eastern apple handlers predict that choicest California apples will reach phenomenally high figures in London and Liverpool next winter.—The severe wind Monday afternoon did considerable damage to the apple crop of Pajaro valley. In some districts there is a heavy showing of apples on the ground. This stock will have to be worked at the driers or cider mills. It is estimated that in some orchards fully 10% of the fruit was knocked down by the wind. That big wind made a heavy slash in the probable profits of the packing firms.—The Red Pearmain were the heaviest "droppers" during the windstorm.

**LARGE APPLE EVAPORATOR.**—Watsonville Pajaronian: J. F. Unglish of Gilroy is putting up a building on the Southern Pacific grounds at Pajaro, which is to be used as an apple evaporator. It will have a capacity of 1000 boxes of apples per day, and will be in operation next month.

### SHASTA.

**WAR ON COYOTES.**—Redding Free Press: A short time ago F. L. Bartlett of the Fall River country brought to the County Clerk's office eighteen coyote hides, claiming bounty thereon to the extent of \$45—\$2.50 apiece. Mr. Bartlett stated that coyotes are quite numerous in his section of the county and that the settlers thereabouts are suffering considerably from depredations by these pests. The settlers are united in their efforts to lessen the number of coyotes in their district, if not to completely exterminate them.

### SONOMA.

**A MAMMOTH PUMPKIN.**—Santa Rosa Republican: A pumpkin which tips the scales at 130 pounds was received at Healdsburg for exhibition in the street fair and in the Board of Trade rooms. This mammoth specimen was grown on the James Carr ranch south of that place.

**GRAPE PICKING.**—Sebastopol Times: Manager Alves of the Vine Hill vineyard has sixty pickers gathering grapes. This is one of the largest vineyards in the county, embracing 200 acres. The crop is rather light this season, but will go about 600 tons. The fruit is being shipped to the Hotchkiss winery at Windsor under the five-year contract recently made. The total value of the fruit on the property this season is about \$15,000, or \$75 per acre.

### SUTTER.

**FIG CROP RUINED.**—Sutter Independent: The recent rain has destroyed the bulk of the fig crop for this section. A large proportion of the Adriatic variety had not been gathered at the time the rain came. That which had ripened and was on the drying trays will be saved. It is roughly estimated, however, that at least three-fourths of the crop has been rendered valueless by the wet, cool weather of the past week.

### TEHAMA.

**CATTLE RAISING PROFITABLE.**—Red Bluff News: A number of the cattle raisers of Paynes creek this year drove their cattle to Susanville, where they sold them to market buyers. Henry Kauffman, Ike McKenzie, John I. Morgan and A. S. Nanney together sold 400 head. Cows brought on an average of \$30 per head and steers \$35, which is equal to about 7 cents a pound.

**A BIG APPLE YIELD.**—Red Bluff News: Wheel Hazen, the champion apple raiser of Tehama county, has sold part of his this year's crop of apples to a New York buyer. Preparations have already been made for packing the crop and 5000 boxes have been hauled to the orchard near Manton. About half the crop will be shipped to New York. The apples will be wrapped in paper, 3000 pounds of which has been purchased for the purpose. The boxes are made to hold forty pounds each, and the 5000 means a total of 200,000

pounds, or 100 tons, which would make a pretty large pile of apples. Mr. Hazen says this is the largest crop he has ever raised on his place.

### TULARE.

**FRUIT EXCHANGE GETTING READY FOR BUSINESS.**—Porterville Enterprise: Preparations for handling the orange crop by the Porterville and Zante Association are going along very smoothly and everything will be in readiness when the season opens. The directors of the Tulare County Exchange met in Porterville Monday and elected J. H. Williams president. The president and secretary were instructed to sign the agreement between the Tulare District Exchange and S. C. F. E. It was decided that the brokerage for all the associations be established at 10 cents per box. The building for the Porterville Citrus Association will be finished by the first of October. The roof is on and the building looks substantial and commodious. At a meeting of the directors it was decided that no packing boxes would be furnished by the association, and that all members must furnish their own. The Zante Citrus Association building is in course of erection and will be finished in time for the opening of the season.

**SOME EARLY MUSCATS.**—Tulare Register: The difficulty Tulare raisin makers have had has been to get their grapes ripened up in season to be out of the way before the rains. This difficulty has been solved at the culture station at Tulare by demonstration. The Bowood Muscatel was ripe and ready for the trays by the middle of August and the second crop is now practically gone, having ripened abundantly. The Huasco, a fine, large grape from Chili, is also weeks earlier than the Muscatelle of Alexandria, which are commonly used here. Think of having grapes on the trays by the middle of August! Such goods would be in the market at the very top of the season.

**WHEAT CROP AT HURON.**—Hanford Journal: L. N. Palmer, the Coalinga grain buyer, says the last thresher in the Huron country finished work Saturday. Harvesting began there the latter part of June and was not concluded until nearly the middle of September. There were fewer harvesting machines in that locality this year, hence those that were there had long runs. The yield of wheat this year ranged from five to eighteen sacks to the acre. The total crop will be about 60,000 sacks; of this there are yet about 10,000 sacks at the Cantua and in the "sinks" north of Huron, while there are about 7000 sacks of wheat in the warehouses at Huron. The rest of the grain has already been shipped.

### YOLO.

**LARGE TOMATOES.**—Woodland Democrat: Mrs. James Young and daughter, Miss Fannie, of Sutter county are guests of Elias Snavelly and family. Mrs. Young brought over with her a box of tomatoes. One tomato measures 18 inches longitudinally and 15½ inches latitudinally, and weighs two and a half pounds.

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## THE HOME CIRCLE.

### The Climber.

How should he know, who hath not won  
Sure victories from sun to sun—  
How can he know, who hath not tried  
The peril of the mountain side?  
What strength of arm is his—what zeal  
In combat with the brave to deal?  
What prowess and what skill he hath  
To find his footing on the path—  
To cling, and cling, and always keep  
His hold of faith along the steep?  
Who tries is also tried. Who dares  
To scale the heights, their danger shares.  
But on the cliff's uneven face  
He finds each day a higher place.  
His strength expands—he thrills to know  
How broad the breathing places grow,  
And every hour some gain is found,  
Some view from wider vantage ground.

—Frank Walcott Hutt.

### The Swamp Singer.

List to his voice—  
Ker-runk! ker-chunk!  
As he sings in the lowland sedges.  
List to the plunge of his dart-like lunge  
As he dives where the cress-meed  
dredges;  
The fox-fire glows in the misty gray  
Of the home of the singer chilly,  
Whose pop-eyes peep in a furtive way  
From the breast of a white pond lily.

List to his voice—  
Ker-runk! ker-chunk!  
As he sits on the bank a-dreaming.  
List to the splash as his sleek legs dash  
To the depths where the fish are gleam-  
ing;  
The sunbeams creep through the leafy  
gloom  
Of the nook of the singer chilly,  
Whose pop-eyes peep from his island  
home,  
The breast of a white pond lily.

—Boston Courier.

### The Remorseful Cakes.

A little lad named Thomas ate  
Hot buckwheat cakes for tea—  
A very rash proceeding, as  
We presently shall see.  
He went to bed at eight o'clock,  
As all good children do,  
And scarce had closed his little eyes  
When he most restless grew.  
He wrapped one leg around his waist  
And t'other round his ear  
While mamma wondered what on earth  
Could ail her little dear.  
But sound he slept, and as he slept  
He dreamt an awful dream  
Of being spanked with hickory slabs  
Without the power to scream.  
He dreamt a great big lion came  
And ripped and raved and roared,  
While on his breast two furious bulls  
In mortal combat gored.  
He dreamt he heard the flop of wings  
Within the chimney flue,  
And down there crawled, to gnaw his ears,  
An awful bugaboo!  
When Thomas rose next morn his face  
Was pallid as a sheet.  
"I never more," he firmly said,  
"Will cakes for supper eat!"

—Eugene Field.

### Abimelech Higgins' Way.

The Peace-on-earth-good-will-to-man  
Society of Peachem was holding its  
regular weekly session, and every woman there was busy patching old garments and cutting out and sewing up new ones, or was otherwise industriously engaged in one branch of that charity which we have Scriptural authority for believing is greater than faith and hope.

"These pantaloons," remarked the wife of the postmaster, bringing a pair of emaciated trousers from a basket and holding them up for the inspection of the society, "is a perfect shame. 'Tisn't that I object to that kind of charity, or any kind for that matter, but I do hate to see a woman let her husband wear clothes till they ain't fit for a self-respecting scarecrow to appear in public in."

"Even a cupful of cold water in charity, Sister Carroll," ventured the wife of the tailor, a gentle little woman who never harbored an unkind thought against a living creature.

"Of all women, you ought to be the

last to advocate men's wearing their clothes too long," tartly responded Mrs. Carroll.

"Sh-sh," came from the wife of the druggist, who held up a reproving finger. "Charity begins at home, and we shouldn't quarrel among ourselves."

"Faith, hope, charity, these three; but the greatest of these is charity," said the wife of the pastor.

Mrs. Carroll smiled, letting the smile include the wife of the tailor.

"Whose pantaloons was these?" inquired Mrs. Sneekles, the wife of the grocer, reaching for the garments, quite regardless of the ethics and relevance of Mrs. Carroll's story.

"Mrs. Higgins sent them in," explained the secretary of the society.

"Oh," smiled Mrs. Sneekles, giving the trousers a vicious jerk, "they're Abimelech Higgins' old pants, air they? Well, I'll bet a cooky if Marthy Higgins got them out of the house without a fuss it was when Abimelech was unconscious or away from home. He's closer than the skin on the back of your hand, and I don't believe he'd give up a single stitch of his old rags for an angel to wear, saying an angel wood wear such."

"Charity, charity!" chorused a number of the ladies.

"Charity be flusterated," replied Mrs. Sneekles, recklessly. "Charity may be greater than faith and hope, but justice is greater than the three of them, and I'm going to speak my mind about Abimelech Higgins though the whole firmament of the heavens caves in. He's got more money than any two people in the community has got and does less good with it than all the rest of us put together." A statement somewhat vague, but Mrs. Sneekles was careless of the quality of her ammunition so long as she succeeded in bringing down her game. "And he's getting worse every day of his life," she went on. "I've known him ever since he wasn't more than knee-high to a hop-toad, and he didn't use to be a bit like he is now. I mind mighty well when he married Marthy Biggs, one of the sweetest girls that ever lived, he gave her a set of earrings and breastpin that cost \$15, wholesale, and for a long time he treated her as if she was a real human being. He used to have a way of keeping her in pocket money by letting her have the extry dollars he would git selling anything. For instance, if somebody offered him \$30 for a cow, Abimelech would dicker and dicker—he was the everlastin'est dickerer, anyway—till mebbe he would squeeze out \$31 or \$31.50 or mebbe \$32, and when he come home he would put the \$30 away and give Marthy the balance, 'jest to make it even,' as he always said. Of course Marthy never got more than \$4 and 90 odd cents, according to what Abimelech got, but she got it a good many times in the course of a year and so made out to git along without having to ask him for money, which no woman that has any respect for herself likes to do, and no man with any respect for her ought to let her do. As he got older he began to git closer and meaner with Marthy, though he called it 'necessary economy,' and the extrys come along so few and far between that Marthy began to look shabby, and bimeby stopped coming to the meetings of this society, as you all know, and I'm telling you now what the reason was, if you hadn't guessed it before."

The members of the society, by this time, had quit sewing to listen to the narrative of Mrs. Sneekles, and though she paused at this point no one ventured to say "Charity" to her—the watchword of the society, and the warning cry to the thoughtless of speech. "But the meanest thing he ever done," resumed Mrs. Sneekles, "was when he sold that farm down on Sand creek. You know it was a fine farm and he got \$10,000 for it, with some extry for a passel of odds and ends he insisted on having pay for, so's all that was coming to him, with the two cents for the stamp on the check that the man who drawed it didn't have at the time and Abimelech let him have, was \$10,249.98. He told Marthy what he got for it—his telling her most everything is his only redeemin' trait—and being that she needed a new dress and other clothes and shoes and stockings

and a bonnet, and the children all needed clothes, and she hadn't had any extry money for she didn't know when, she thought Abimelech would let her have something out of it, jest to make it even, if for no other reason. Ten thousand dollars was enough for him, anyway, for there was a whole lot in morgidges besides, and so Marthy dreamed of the new things she was going to get till her cheeks acculy began to redden and her eyes to shine like they used to. She was hoping she would git the whole \$249.98, but if she didn't she knew of so many nice little things she needed that she could get for the \$49.98; but if she didn't get that she could get the children something for the \$9.98, and even if she didn't get that 98 cents would buy enough calico to make the two little girls new dresses to wear to school. I really don't know what some women is made of. I know I ain't made of it, for before I'd 'a' done like Marthy Higgins I'd chased Abimelech off the place with a broomstick.

"Well, Abimelech come home that day at noon with the money to let Marthy see it before he put it in the bank, and she was looking mighty cheerful, and had a nice dinner for him that she raised in her own garden and cooked herself, for he couldn't afford to have a hired girl, so he said. He come back in the dinin'-room where she was and spread it all on the table before her, and counted it out in five hundred-dollar bills, and hundreds, and fifties, and tens, and fives, and twos, and ones, and on down to the nickles and coppers till the very last cent was in the pile.

"There's \$10,249.98 Marthy," he says, drawing out the figures between his teeth like he was eating molasses candy.

"Oh, Bim," says Marthy—she always called him Bim—'ain't it perfectly lovely?' And she reached out for it as if she wanted to hug it to her bosom, but Abimelech, he put his hand out and stopped her.

"There's only one thing lackin'," says he, looking at her like a sheep-killin' dog.

"What's that, Bim?" she asked, kind of trembly, because she was afraid he was worrying about what he was going to give her.

"Two cents, jest to make it even, Marthy," he said. 'Ain't you got that much somewheres around that you can give me?'—W. J. Lampton, in Saturday Evening Post.

### When in Danger of Nervous Collapse.

A woman who finds herself tiring at every exertion is in danger of nervous collapse. She who fails to sleep soundly is especially liable to such a breakdown. To avoid such a possibility, rest is absolutely necessary, but not a rest that means idleness; such rest would be the worst possible thing. What is necessary, though, is to break up accustomed routine of work, and to do all things moderately; take your breakfast in bed, rise late, retire early, abandon all unnecessary exertions, drink two or three quarts of rich cocoa a day, . . . or use this same amount of milk with cereals or in simple puddings. Eat nourishing food, the heavy meal preferably in the middle of the day. Keep out of doors as much as possible, but do not allow yourself to become exhausted with too much walking. Occasionally during the day take ten minutes rest on the flat of your back if possible, and if you manage to get the proverbial "forty winks," so much the better. Go to bed early, and go to bed each night at the same time. Darken your room absolutely, and at once. Do not try to read, knowing you cannot sleep, or you will not. Close your eyes, and, selecting a comfortable position, with all the muscles and nerves relaxed, direct your glance upward. In doing this, avoid the slightest effort; it may take several nights' trial to quit making the effort, but when you succeed—and you will in a very short time—you will sleep restfully and well; and the more sleep one manages to get while in a nervous condition, the less will be the danger of prostration.—American Queen.

### The Cause of Appendicitis.

The following article is reproduced from the University Medical Magazine because it very clearly demonstrates the folly of fearing to eat seedy fruits, such as grapes, raspberries, etc., on account of the possibility of appendicitis developing because of the lodgment of seeds in the vermiform appendix. This fear has in many localities lessened the consumption of certain fruits, and while injuring the fruit growing industry, the chief reason for regret is that many people deny themselves the use of wholesome fruits:

An interesting study of the relative frequency of foreign bodies in the vermiform appendix is presented by Dr. J. F. Mitchell in the Johns Hopkins Hospital Bulletin for January, February and March, 1899. Of 1400 cases of appendicitis collected from various sources during the last ten years he found only 7% of true foreign bodies; while in 700 of these cases, in which a definite statement was made as to the nature of the foreign body, there were 45% of fecal concretions. In 250 cases of appendicitis in the Johns Hopkins Hospital, in the past ten years, there was only one foreign body—a segment of tapeworm. Osler, in ten years' experience in Montreal, found foreign bodies only twice; in one instance five apple pips, and in another eight snipe shot. The most common foreign bodies have been gallstones, round worms, spicules of bone, bristles and pins.

Pins have been especially frequent. Dr. Mitchell has collected twenty-eight cases in which a pin was found in the appendix at operation or autopsy, together with two instances in which a pin had perforated the cæcum. It seems remarkable that in no single case was there any knowledge of a pin having been swallowed. Contrary to what might be expected, they occurred more frequently in males than in females (males seventeen; females, nine). The resulting appendicitis was of a very variable type, in some cases the symptoms were mild, leading to chronic appendicitis, with recurrent attacks, or with long-continued pain, perhaps, finally ending in an abscess. In the majority of cases, however, there was rapid perforation and abscess formation following the first appearance of symptoms.

The pin entered the appendix by its head or point, and, except in one or two instances, where it lay directly across the lumen, it was straight, with its long axis parallel to that of the appendix. In seven of the twenty-eight cases the appendicitis was associated with abscess of the liver. The author concludes from his investigations that foreign bodies at one time thought essential in appendicitis are now known to play a much smaller role than that formerly accredited to them; and fecal concretions are much more apt to be present as an exciting cause. Foreign bodies of light weight, like grape seeds and cherry stones, so popularly assigned as the cause of appendicitis, and against which we are forever being warned, are in reality exceptional, and their frequency is much over-estimated on account of the close resemblance of fecal concretions and the lack of careful examination of the bodies described.

An Indianapolis woman called up her grocer by telephone the other morning, and after she had sufficiently scolded the man who responded, she said: "And what's more, the next order you get from me will be the last I'll ever give you." "It probably will, madam," said the voice at the other end of the wire, "you are talking to an undertaker."—Indianapolis News.

"EXPERIENCE," said Uncle Eben, "is a ve'y pow'ful teacher, but you wants to look out fo' her. It doesn't do de sailor no good to know whah de rock is aftuh he has done run into it."—Washington Star.

"SHE: 'I suppose you never met your affinity, Mr. Olebatch?' He: 'I don't know. One can't tell one's affinity except by marrying, and then it may turn out to be a case of mistaken identity.'—Puck.



## Detective Deduction.

"Aha!" exclaimed Sherlock Holmes. His companion started as one who is recovering from a fit, and asked:

"What is it?"

"Did you notice the man who passed us just now? There he is, looking at the pictures in the window of that news store."

"What about him?"

"He is the father of a little child. His wife has to take care of the baby, because they can't afford to keep a nurse girl; and once he ran a needle under his thumbnail."

"Who is he?"

"I haven't heard his name. Until he passed us a moment ago I was not aware that there was such a person as he in existence."

"Now, Sherlock, don't try to make me believe that you are not gifted with a mysterious power of some kind that enables you to fathom things which are forever hidden from the knowledge of other people. I believe you are the seventh son of a seventh son or something of that kind. I almost feel creepy when I am in your company."

"My dear fellow," the great amateur detective answered, "you are foolish to permit yourself to entertain such absurd notions concerning me. I was born near Scrubgrass, Pa., of poor parents, who were too ignorant to understand that it is foolish to work when there are so many people waiting to be worked."

"No, it is simply my wonderful power of deduction that enables me to make these discoveries. Just one little thing about this man tells me what I have disclosed to you concerning him. He can't afford to hire a nurse girl, and he is the father of a little child. How do I know this? If he didn't have to count the pennies he would have his clothes kept in good condition by some tailor."

"Very well, but how do you know he has a young child and that his wife takes care of it?"

"One of his suspenders is fastened to his trousers with a safety pin. You see it plain enough. If his wife didn't have to take care of the baby she would sew a button on for him, and without a baby in the house there would be no loose safety pins for him to get hold of. The fact that he once ran a needle under his thumbnail keeps him from sewing the button on himself."

The pretty young woman who wore one of these thin shirtwaists which have a tendency to sag passed then, and Mr. Holmes hurried after her to make further deductions.—Chicago Record-Herald.

## She Ordered Lemonades.

She was entertaining a friend from a town in the northern part of the State, and when the beauties of the parks and the wonders of the city had been enjoyed, the drive to Whitefish Bay was next in order. There was the usual crowd at the resort, but they were fortunate in getting a table. A hurried waiter presently swooped down upon them to take their order.

"Two lemonades," said the hostess, timid but dignified.

The pleasure seekers gave their attention to the music and the crowd and enjoyed the general animation, while the band disposed of two numbers on the programme, and still the lemonade did not appear.

"We want two lemonades," she called to a waiter rushing past. The band played selections from "Princess Chic." She looked with growing anxiety at her watch and hailed a third waiter with:

"We are in a hurry and want our lemonade."

Just as "Princess Chic" was brought to a triumphant close two lemonades were placed before the two women and were promptly paid for. Before all the straws had been tested the second waiter swept two lemonades from his tray to the table.

"We have been served," the hostess said, with dignity.

"You ordered from me," was his reply.

"Yes, but—," she began.

"I paid for this, now you pay me," said the waiter, looking obdurate.

"I wouldn't do it," interposed her friend, indignantly; but the waiter waited. The bandmaster was raising his baton to begin "The Bohemian Girl" when the third waiter appeared on the scene.

With dexterity he swept the glasses on the table and with a flourish presented two more lemonades.

"We have lemonades," she faltered.

"You ordered from me," he replied, with the air of one sure of his position.

"Yes, but—,"

"I paid for it, now you pay me," was the response.

Her face would have softened the heart of any man out of "professional hours," but the waiters still waited. She looked from them to the smiling crowd around them and felt she was "in for it," so she paid for the six lemonades—paid for them like a man.

"And, just think of it," she said, with tears in her eyes as she told the story, "they were 10 cents a glass."—Milwaukee Sentinel.

## American and Other Turquoises.

"This country is now producing the bulk of the world's supply of turquoise, which is the most important of American gems commercially, the output being mainly from New Mexico, where the deposits have been worked at irregular periods for centuries," declares the Manufacturing Jeweler. "Long before the time of Columbus the New Mexican mines were worked in a primitive way by the aborigines, and in these days the same stores of mineral treasure are yielding stones up to 60 carats in weight and of quality equal to the finest Persian. Two companies are turning out more than \$200,000 worth of turquoises annually, and a guarantee is given to replace any specimen that changes color within six months. Turquoise owes its beautiful blue to the presence of phosphate of copper. For reasons not well understood, the color is not always permanent, and to this trouble the Egyptian stones are particularly liable. Persian turquoises frequently alter, but the New Mexican comparatively seldom. The Persian stones are a softer blue than ours and more opaque; the Egyptians are darker. The aborigines of New Mexico took out the turquoise by building fires against the rocks so as to crack them, and thus get out the precious substance. The Egyptian turquoises, so called, come in reality from Mount Sinai. The highly valued Persian stones are obtained from Nishapur in the most primitive manner. A wooden wheel, operated by the feet of two men lying on their backs, brings the broken rock to the surface in bags, the fragments are smashed with hammers, and when a turquoise is discovered it is put aside and sent with the next batch to Meshed to be cut."

## DOMESTIC ECONOMY.

## Hints to Housekeepers.

To prevent the croquettes from sticking to the wires dip the frying basket into the hot fat before filling it.

To disperse black ants a few leaves of green wormwood, scattered among the haunts of these troublesome insects, is said to be effectual in dislodging them.

The dustcloth for any room should be lightly sprinkled before using, and should be washed and dried after every dusting operation. Dirty dustcloths do more harm than good in cleaning a room.

A thick paring should be taken from cucumbers in order to remove the bitter portion lying directly under the skin. A very thick slice should, for the same reason, be removed from the stem end.

To cure felons stir half a teaspoonful of water into one ounce Venice turpen-

tine with a rough stick until the mixture appears like granulated honey. Wrap a good coating of it round the finger with a cloth. If the felon is only recent, the pain will be removed in six hours.

Lemon sauce is delicious with fruit balls. Cream together one tablespoonful of cornstarch, one tablespoonful of butter, one egg and one-half cupful of sugar. Pour over them, stirring constantly, two cupfuls of boiling water and cook until thick. Remove from the stove and add the juice and rind of one lemon. Serve in a boat.

## Domestic Hints.

MEAT CAKE.—Mince any cold beef or beefsteak, and mix it with an equal weight of breadcrumbs; add a little very finely chopped onion and parsley, add a little stock, seasoning, and a well-beaten egg. Form into a cake, and fry in dripping (about an ounce will be sufficient). This may be served with or without brown sauce.

RICE FRITTERS.—Boil one-half a cup of rice in a cup of milk until the rice is tender. Add the beaten yolks of two eggs, a tablespoonful of sugar, a sprinkle of cinnamon and nutmeg and two teaspoonfuls of softened butter. Remove from the fire and let cool before adding the beaten whites of the eggs. Drop in spoonfuls into plenty of boiling lard or fat and let them fry a light brown. Serve with a wine sauce or one flavored strongly with lemon.

MADEIRA JELLY.—Dissolve three ounces of gelatine and one-half pound of lump sugar in one quart of water, and then strain it through a fine hair sieve. Mix one and one-half pints of Madeira wine with the strained liquor, turn the whole into a copper whipping bowl packed in ice and whip the jelly well. In about twenty minutes time remove the jelly from the ice and whip it for ten minutes longer. If it has come to be too firm stand the bowl in a basin of hot water and whip it for another minute or two. When beaten to a stiff froth pour the jelly into a mould, pack it in ice and leave it for a couple of hours or so. When ready to serve dip the mould in warm water to loosen the contents, then wipe the edges of the mould and turn out the jelly.

QUINCE AND LEMON JAM.—Peel, core and slice quinces, reserving the paring and cores for jelly. Put the quinces over the fire in just enough water to cover them, and stew until they are soft. The allowance of sugar should be the same for this as for the peach marmalade—three-quarters of a pound to every pound of the fruit. It will take a good while to reduce the quinces to the requisite softness, and they must be stirred and beaten often with a stout wooden spoon. When the fruit is well broken in pieces, add the sugar, and at the same time put in the juice of one large lemon for every two pounds of the fruit. Boil ten minutes after it has again come to the boil, and after the kettle has been removed from the fire add the chopped peel of one lemon for every five pounds of the conserve. This is a good and an unusual jam.

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## S. F. Market Report.

### Produce Market.

SAN FRANCISCO, Oct. 2, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May
Wednesday.....	70 3/4 @ 70 1/4	74 1/4 @ 73 3/4
Thursday.....	70 3/4 @ 70 1/4	74 1/4 @ 73 3/4
Friday.....	70 3/4 @ 70 1/4	73 3/4 @ 73 3/4
Saturday.....	69 3/4 @ 70 3/4	73 3/4 @ 74 1/4
Monday.....	70 1/4 @ 69 3/4	74 @ 73 3/4
Tuesday.....	70 1/4 @ 69 3/4	73 3/4 @ 72 3/4

### CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May
Wednesday.....	36 3/4 @ 36 1/4	38 1/4 @ 38 1/4
Thursday.....	36 3/4 @ 36 1/4	38 3/4 @ 38 3/4
Friday.....	35 3/4 @ 36 1/4	37 3/4 @ 38 1/4
Saturday.....	36 @ 36 1/4	38 @ 38 1/4
Monday.....	35 3/4 @ 36 1/4	37 3/4 @ 37 3/4
Tuesday.....	35 3/4 @ 34 3/4	37 3/4 @ 37

### SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May
Thursday.....	99 3/4 @ 99 1/4	1 03 1/4 @ —
Friday.....	99 3/4 @ 99 1/4	— @ —
Saturday.....	99 3/4 @ 1 00	1 03 1/4 @ 1 04 1/4
Monday.....	99 3/4 @ 99 1/4	— @ —
Tuesday.....	99 3/4 @ 99	1 03 1/4 @ —
Wednesday.....	98 3/4 @ 98 1/4	1 02 3/4 @ 1 02 1/4

### WHEAT.

No changes of consequence have been developed in the condition of the local wheat market since last report. The demand has been of a slow order, shippers as a rule being fairly stocked and preferring to load cargoes from their own holdings rather than to purchase ahead to any great extent. The situation locally has been rendered quite unfavorable to the producing and selling interest, on account of the strike, termed "sympathetic," but very "unsympathetic," judging from the shooting and pummeling, the mashed heads and broken limbs resulting therefrom. While these labor troubles have interfered very seriously with the export trade, it looks as though shippers were taking advantage of the situation to depress wheat as much as possible in their own interest, displaying much the same sort of sympathy for the producer as the strikers are manifesting towards those who are willing to work in the places vacated by them. In the "sympathetic" struggle, the farmer is faring badly on all sides. Ships are now being loaded about as rapidly as ordinarily, but with the rainy season at hand, and large quantities of grain exposed to the elements and awaiting an immediate market, the buyer is in a position to have matters very much his own way for the time being.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.00 @ 98 3/4 c.

May, 1902, delivery, \$1.04 @ 1.02 1/2.

Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at 99 3/4 @ 99 3/4 c; May, 1902, \$1.03 @ 1.03 1/2.

California Milling.....	98 3/4 @ 1 02 1/4
Cal. No. 1 shipping, alongside.....	95 @ 97 1/4
Oregon Valley.....	95 @ 98 3/4
Washington Blue Stem.....	95 @ 1 02 1/4
Washington Club.....	92 1/4 @ 97 1/4
Off qualities wheat.....	90 @ 92 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	65 1/4 @ 65 7/8	55 1/4 @ 55 10 1/4
Freight rates.....	42 1/4 @ 45 1/8	38 1/4 @ 37 1/8
Local market.....	\$1 03 3/4 @ 1 05	95 @ 98 3/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on September 1st and October 1st:

Tons—	Oct. 1st.	Sept. 1st.
Wheat.....	*134,373	110,871
Barley.....	†84,414	66,543
Oats.....	4,608	4,109
Corn.....	139	171

\*Including 73,135 tons at Port Costa, 60,104 tons at Stockton.

†Including 52,870 tons at Port Costa, 26,265 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show an increase of 23,502 tons for the month of September. A year ago there were 221,442 tons wheat in Call Board warehouses.

### FLOUR.

While there are no changes to record in quotable rates, the market presents an easy tone. Considering the fact that most of the mills of the coast have been lately

idle or running on short time, supplies are of fair proportions and sufficient to accommodate a much heavier demand than dealers are being favored with.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

### BARLEY.

Although there has been a heavy outward movement and barley continues to be forwarded rather freely to Europe and the East, shippers are not doing much purchasing in this center. Values remain quotably much as last noted, but top figures are not readily realized, being more in accord with the views of sellers than with the bids of buyers. Shipments for the season to date aggregate over 67,000 tons, as against 50,000 tons for corresponding time last year and 85,000 tons for same period two years ago. Business on local account is light. Market for feed descriptions lacks firmness, although offerings are not particularly heavy.

Feed, No. 1 to choice.....	72 1/4 @ 73 1/4
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	75 @ 82 1/4
Chevalier, No. 1 to choice.....	97 1/4 @ 1 02 1/4
Chevalier, poor to fair.....	75 @ 90

### OATS.

Were it not for recent purchasing on Government account, it is probable that values for this cereal would be at lower levels than now quoted. Local dealers are operating very slowly, most of them being fairly stocked, and not caring to load up heavily at existing prices. Increased receipts from the North are looked for in the near future.

White Oats, fancy feed.....	1 20 @ 1 25
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 17 1/2
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 22 1/4 @ 1 27 1/4
Black Russian.....	85 @ 1 15
Red.....	95 @ 1 20

### CORN.

Stocks are of small proportions, and prospects are poor for any marked increase in offerings in the near future. At existing rates, however, not much corn is required to satisfy the demand. Business is necessarily at present largely of a retail character.

Large White, good to choice.....	1 70 @ 1 75
Large Yellow.....	1 65 @ 1 70
Small Yellow.....	1 75 @ —
Eastern, in bulk (carload lots).....	1 55 @ 1 60

### RYE.

There is more offering than immediate demand can be found for, except at extremely low figures.

Good to choice, new.....	77 1/4 @ 80
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### BUCKWHEAT.

The immediate demand is not urgent, and there is no improvement to note in bids.

Good to choice.....	1 40 @ 1 60
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### BEANS.

Offerings of new crop beans up to present writing have been mainly Large Whites or Lady Washingtons and Bayos. Market for these varieties is lacking in firmness, as is natural at the opening of the season, under tolerably free arrivals. It is not probable, however, that values will descend much below current levels, unless for poor stock crowded to sale. Some of the samples now on market, more especially of Large Whites, show bad handling in threshing, with a large percentage of dirt and many broken beans. Such stock has to go through a cleaner before being fit for shipment, the cleaning involving additional expense and heavy shrinkage, thus pulling down the price materially. There is every prospect for a fairly good market for choice beans, but it is the rare exception when seriously defective can be placed to advantage. There are very few Small White or Pea beans, which accounts for the high prices on these. Large quantities could not, however, be placed at current figures. Limas are difficult to quote, market being nearly bare.

Pea, fair to good, 100 lbs.....	4 50 @ 5 00
Small White, good to choice.....	4 50 @ 4 75
Lady Washington.....	2 65 @ 2 85
Plinks.....	2 40 @ 2 60
Bayos, good to choice.....	2 50 @ 2 75
Reds.....	3 00 @ 3 25
Red Kidney.....	3 50 @ 4 00
Limas, good to choice.....	6 40 @ 6 50
Black-eye Beans.....	3 25 @ 3 50
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

### DRIED PEAS.

Market for Green Peas is weak and lower, sales being difficult to effect in wholesale fashion at the reduced figures, most of the local millers and dealers having recently stocked up quite freely. Values for Niles Peas are showing more

steadiness than for Green, but demand for them at full figures is not active.

Green Peas, California.....	1 75 @ 2 25
Niles Peas.....	1 40 @ 1 55

### WOOL.

A quiet week has been experienced in the local wool market, with not much desirable stock offering here at present, and furthermore, many of the principal operators have been absent in the interior much of the time since date of last report. For fine wools the market remains firm at current figures, more especially for stock free from burrs and seeds.

### SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

### FALL.

Humoldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 11
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 1/2 @ 8 1/4
San Joaquin Lambs.....	7 1/4 @ 9

### HOPS.

No business of consequence has been yet consummated in new crop hops, growers and dealers being too far apart in their views of values. It now looks as though the market would be a dragging one for some weeks to come, especially if 15c. or thereabouts continues to be asked for choice. If pressure to realize were exerted at present, low figures would have to be accepted.

Good to choice 1901 crop.....	10 @ 13
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### HAY AND STRAW.

Best qualities of hay are meeting with a moderately firm market, although in quotable rates there are no special changes to record. Common to medium qualities are being offered most freely and for these descriptions the demand is least urgent, causing the market for other than choice to select to incline in favor of buyers.

Wheat, good to choice.....	7 50 @ 10 50
Wheat and Oat.....	7 00 @ 9 50
Oat.....	6 50 @ 9 00
Alfalfa.....	8 50 @ 10 50
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 7 00
Compressed.....	8 00 @ 10 00
Straw, 3/4 bale.....	25 @ 40

### MILLSTUFFS.

While tendency of prices for mill offal is to easier figures, owing to some increase in offerings and prospects of heavier supplies at an early day, stocks have not yet been given opportunity to accumulate to any appreciable degree. Prices the current week have not fluctuated materially for mill feed of any description.

Bran, 3/4 ton.....	20 00 @ 21 00
Middlings.....	21 00 @ 22 50
Shorts, Oregon.....	20 00 @ 21 00
Barley, Rolled.....	17 00 @ 17 50
Cornmeal.....	34 00 @ —
Cracked Corn.....	35 00 @ —

### SEEDS.

Market for mustard seed is ruling steady, with no particularly heavy offerings and no disposition to crowd stocks to sale at the expense of having to make marked concessions to buyers. Prices for flax and and bird seed remain without quotable changes.

	Per ctt.
Flax.....	2 50 @ 3 00
Mustard, Yellow.....	3 15 @ 3 25
Mustard, Trieste.....	3 00 @ 3 15
	Per lb.
Canary.....	3 1/4 @ 3 1/4
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/4

### BAGS AND BAGGING.

Very little doing in this department, this time of year being invariably an inactive period in the bag trade. Prices throughout remain nominally as last quoted.

Calcutta Grain Bags, spot.....	7 1/4 @ 7 1/2
San Francisco Grain Bags, 22x36, spot.....	7 @ 7 1/4
Wool Sacks, 4 lbs.....	31 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 31
Fleece Twine.....	8 1/4 @ —
Gunnies.....	— @ —
Bean Bags.....	5 1/4 @ 5 1/2
Fruit Sacks, cotton, three sizes.....	5 1/4, 6, 6 1/4
Fruit Sacks, Jute.....	7 @ 7 1/4

### HIDES, PELTS AND TALLOW.

Values for Hides are ruling steady. That there will be any special fluctuations in prices in the near future is not anticipated. Pelts are selling at quotably unchanged rates, with demand fair. Tallow is in good request for shipment and market is firm. One steamer took this week 86,000 pounds for Central and South American points.

### HONEY.

Business doing in this product is not of heavy volume. Values are being tolerably well maintained, more through absence of undue selling pressure than on account of demand at full current rates. Business is mainly of a jobbing character, large oper-

ators refusing to take hold in wholesale fashion at the prices generally asked.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/4 @ —
Extracted, Amber.....	4 @ —
White Comh, 1 lb frames.....	10 @ 12
Amber Comh.....	7 @ 9
Dark Comh.....	6 @ 7

### BEESEWAX.

Spot stocks are of very moderate volume. Current values are being well maintained, with no lack of demand, especially for best qualities.

Good to choice, light, 3/4 lb.....	26 @ 28
Dark.....	24 @ 25

### LIVE STOCK AND MEATS.

Market for Beef shows no special change, immediate offerings and demand about balancing. Mutton is being favored with a steady market, although there is enough arriving for present needs. Lamb is selling at unchanged figures, but is mostly too heavy to be specially sought after. Veal is in fair supply and market for ordinary is weak at quotations. Hogs are arriving freely, causing market to incline slightly in favor of packers, but it is not probable that the market will develop any very pronounced weakness.

Beef, first quality, dressed, net 3/4 lb.....	6 @ 6 1/4
Beef, second quality.....	6 @ —
Beef, third quality.....	5 1/4 @ —
Mutton—ewes, 6 @ 7c; wethers.....	7 @ 7 1/4
Hogs, hard grain fed, medium.....	5 1/2 @ 6
Hogs, small, fat.....	5 1/2 @ 6
Hogs, large, hard.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	7 1/4 @ 7 1/2
Veal, small, 3/4 lb.....	7 @ 9
Veal, large, 3/4 lb.....	7 @ —
Lamb, spring, 3/4 lb.....	7 1/4 @ 8

### POULTRY.

The market has been most of the week in unsatisfactory shape for sellers, the depressed condition being mainly due to the same cause operating with varied intensity for some time past against the producer and handler of California poultry, viz.: heavy arrivals and offerings of Eastern, both live and dressed. Much of the imported poultry is sold under cost, through the eager and cutting competition of a few big dealers who are trying to control the trade.

Old Turkeys, live hens, 3/4 lb.....	— @ —
Old Turkeys, live gobblers, 3/4 lb.....	— @ —
Young Turkeys, full grown.....	14 @ 16
Hens, California, 3/4 dozen.....	3 50 @ 5 00
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 00 @ 5 00
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 25 @ 2 75
Ducks, old, 3/4 dozen.....	3 00 @ 3 50
Ducks, young, 3/4 dozen.....	3 50 @ 4 00
Geese, 3/4 pair.....	1 50 @ 1 75
Goslings, 3/4 pair.....	1 50 @ 1 75
Pigeons, old, 3/4 dozen.....	1 25 @ 1 50
Pigeons, young.....	1 75 @ 2 00

### BUTTER.

For most select qualities of fresh the market has been showing more firmness. Some favorite marks are selling above quotations. The strength of the market, however, does not extend to medium and common grades. The trade which is not on best fresh is mainly on ice-house goods, which are in liberal supply and include some butter showing excellent condition, comparing very favorably with fresh product.

Creamery, extras, 3/4 lb.....	26 @ —
Creamery, firsts.....	22 @ 23
Creamery, seconds.....	20 @ 21
Dairy, select.....	22 @ 23
Dairy, firsts.....	19 @ 20
Dairy, seconds.....	18 @ 20
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll, 3/4 lb.....	19 @ 20
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/4

### CHEESE.

There are no heavy supplies of domestic product, and market is firm at rates quoted, some sales being effected at an advance on these figures. Markets East are quoted firm, according to private advices, with prospects of higher prices being soon established.

California, fancy flat, new.....	11 @ —
California, good to choice.....	10 @ 10 1/2
California, fair to good.....	9 1/4 @ 10
California, "Young Americas".....	12 @ 12 1/4

### EGGS.

Market is lightly stocked with select fresh, large, white and clean eggs, and for such stock comparatively stiff figures are being realized, in some instances above quotable rates. Common qualities of fresh, although not in heavy stock, are not especially sought after and have to go at rather low figures, owing to cold storage eggs of good quality being plentiful and cheap.

California, select, large, white and fresh. 34 @ 36	
California, select, irregular color & size. 30 @ 32 1/4	
California, good to choice store.....	24 @ 26
Eastern, good to choice.....	20 @ 22
Cold Storage.....	20 @ 24

### VEGETABLES.

A firmer market has developed for Onions since last review, with only moderate offerings and improved demand. With above exception, the market for



vegetables was in generally weak condition, offerings in the main proving more than sufficient for the immediate inquiry. Lima Beans were appreciably lower, going mainly by the sack. Prices for Tomatoes suffered a sharp decline.

Beans, String, # lb.	2 @ 2 1/2
Beans, Lima, # lb.	2 @ 3
Cabbage, choice garden, # 100 lbs.	40 @ 50
Cauliflower, # dozen	40 @ 50
Corn, Green, # sack	50 @ 75
Corn, Green, Alameda, # large crate	75 @ 1.00
Cucumbers, Bay, # large box	25 @ 40
Egg Plant, # box	35 @ 50
Garlic, # lb.	2 @ 3
Okra, Green, # to x	35 @ 50
Onions, Yellow Danver, # cental.	1 00 @ 1 20
Peas, Sweet garden, # lb.	2 @ 2 1/2
Peppers, Green Chile, # sack	30 @ 40
Peppers, Bell, # box	40 @ 50
Squash Summer, # small box	25 @ 40
Summer Squash, Bay, # large box	50 @ 75
Tomatoes, # large box	25 @ 40
Tomatoes, # small box	15 @ 25

#### POTATOES.

While asking figures and quotable values have continued close to prices ruling the preceding week, the market has been slow and unfavorable to sellers. Most of the potatoes now offering in this center represent purchases made in the interior at relatively stiffer figures than are obtainable at present in a wholesale way. Sweeties are in fair supply and are selling mainly within range of 50c. @ \$1 per cental, latter figure being for Merced stock.

Burhanks, Salinas, # 100 lbs.	1 20 @ 1 50
San Leandro, in sacks, # cental.	1 00 @ 1 25
River Burbanks in sacks, # cental.	60 @ 1 10
Mission Garnet Chile, in sacks.	90 @ 1 15
Sweeties, new, # cental.	50 @ 1 00

#### The Fruit Market.

#### FRESH FRUITS.

Receipts are on the decrease and the list of varieties is being narrowed down to the proportions common to the autumn season. The first Persimmons of the current crop arrived Monday and were held at \$1.25 @ 1.50 per box, with few sales possible at these figures. Apples are not arriving in large quantity, nor is there a very heavy proportion of present offerings of choice to select quality. For high-grade Apples the market is firm, and gives prospect of so continuing throughout the season. Common stock moves slowly at rather low values, despite the fact that offerings of this sort are not especially heavy. Pears now coming forward are principally Winter varieties and include few which are ripe enough to be sought after for immediate use. Values for common Pears show no material change, while select are higher, but only for strictly choice can extreme current figures be depended on. Peaches did not make much of a display nor was the demand active; prices were without material improvement. Plums were in light stock and choice sold fairly well. Grape market was tolerably firm for desirable wine varieties, which were in rather light receipt, but of Table Grapes, other than Seedless, there were more than required to satisfy the immediate demand at current values. Melons of all kinds were in liberal supply, as compared with the inquiry, and prices in the main favored buyers, averaging lower than preceding week. Strawberries and Raspberries were in very moderate receipt, but did not sell at materially higher figures than had been ruling. Huckleberries were in fair demand at quotably unchanged rates.

Apples, fancy, # 4-tier box.	1 25 @ 1 50
Apples, good to choice, # 50-lb. box.	50 @ 1 00
Apples, common to fair, # 50-lb. box.	35 @ 50
Apples, green, # 50-lb. box.	35 @ 60
Blackberries, # chest.	3 50 @ 5 00
Cantaloupes, # crate.	35 @ 75
Figs, # drawer and box.	40 @ 65
Grapes, Isabella, # crate.	40 @ 75
Grapes, Black, # crate.	40 @ 65
Grapes, Muscat, # crate.	40 @ 65
Grapes, Tokay, # crate.	40 @ 70
Grapes, Zinfandel, # ton.	28 00 @ 32 00
Grapes, White, # ton.	18 00 @ 20 00
Logan Berries, # chest.	5 00 @ 6 00
Nutmeg Melons, # crate.	30 @ 60
Peaches, # box.	30 @ 65
Pears, Winter Nells, # 40-lb. box.	50 @ 1 00
Pears, other kinds, # box.	35 @ 75
Plums, # box.	30 @ 65
Pomegranates, # box.	65 @ 1 00
Prunes, # crate.	50 @ 90
Quinces, # box.	35 @ 50
Raspberries, # chest.	6 00 @ 7 00
Strawberries, Longworth, # chest.	6 00 @ 7 00
Strawberries, Large, # chest.	3 50 @ 5 00
Watermelons, # 100.	3 00 @ 12 50
Whortleberries, # lb.	6 @ 8

#### DRIED FRUITS.

The market for cured and evaporated fruits continues quiet, trade in most descriptions being light, both for shipment and on local account. Quotable values are in the main without appreciable change, but wholesale handlers and jobbers are in the majority of instances more interested in reducing their own holdings of the early cured fruits than they are in purchasing any present offerings of the same at full values lately current. Under selling pressure of Apricots, Apples, Peaches

or Plums, lower figures would probably have to be accepted, but there is no business reported at cuts in prices which would warrant reducing quotations. There are not many Apricots offering from first hands, and the quantity of choice Plums seeking custom is not large. Peaches are dragging at unchanged rates, Eastern buyers taking hold sparingly at figures ruling, the crop East being reported as turning out somewhat better than early estimates indicated. Most of the season's output of evaporated and dried Apples is yet to come forward. The local market for both Apples and Peaches hinges on conditions East, and as the situation on the Atlantic side is temporarily lacking in firmness, there is an easy feeling here, although free purchases are not possible at any quotable decline. Last year's Prunes are still being offered on the 3 @ 3 1/2c. basis for the four sizes, with little doing in them. In new Prunes some recent transfers are reported on 3 1/2 @ 3 3/4c. basis, latter figure for Santa Claras, but it is not believed that any very heavy purchases could be effected at these prices, which are discouragingly low for the producing interest.

#### EVAPORATED OR BLEACHED.

Apricots, Royal, prime.	7 1/2 @ 8
Apricots, Royal, choice, in sacks, # lb.	9 @ 10
Apricots, Moorpark.	10 @ 13
Apples, in 50-lb boxes, rings, pressed, fancy.	8 @ —
Apples, 50-lb boxes, rings, pressed, good to choice.	7 @ 7 1/2
Figs, pressed.	5 @ 7 1/2
Nectarines, # lb.	5 1/2 @ 7
Peaches, unpeeled, fancy.	7 @ 7 1/2
Peaches, unpeeled, choice.	6 @ 6 1/2
Peaches, peeled, in boxes.	12 @ 14
Pears, halves, choice to fancy.	7 1/2 @ 9
Plums, Red and Black, pitted.	5 @ 6
Plums, White and Yellow.	5 1/2 @ 6 1/2
Prunes, 4 sizes, in bags, 3 @ 3 1/2c; 50-60s, 4 1/2 @ 4 1/2c; 60-70s, 3 1/2 @ 4c; 70-80s, 3 1/4 @ 3 1/2c; 80-90s, 2 3/4 @ 3c; 110s and less, 2 @ —c.; these figures for 1900 crop; New Prunes, 1/2 @ 1/4c. higher.	

#### COMMON SUN-DRIED.

Apricots.	6 @ 7
Apples, sliced.	4 @ 5
Apples, quartered.	4 @ 5
Figs, Black.	2 1/2 @ 3
Figs, White.	3 @ 3 1/2
Peaches, unpeeled.	5 1/2 @ 6 1/2
Pears, prime halves.	5 1/2 @ 6 1/2
Plums, unpitted, # lb.	1 1/2 @ 2 1/2

#### RAISINS.

The Raisin Growers' Association has issued a price list, which is given below. These figures are extremely low, made so, the Association states, on account of not having control of a sufficient percentage of the crop to be able to maintain prices at a high standard. These figures are subject to immediate change, no guarantee of their permanency being given. For non-Association Raisins of this season's curing, thus far presented for sale, higher prices have been asked, and have been mainly on basis of 5c for 3-crown loose Muscatel in carload lots.

Following are the Association prices for Raisins, f. o. b. cars, Fresno; jobbing prices in carload lots:

Two-crown London layers, per 20-lb box.	\$1 25
Three-crown London layers	1 35
Four-crown, fancy clusters	1 75
Five-crown, Dehesa clusters	2 50
Six-crown, Imperial clusters	3 00
Two-crown Standard Loose Muscatels, # lb.	3 1/2c
Seedless Muscatels, # lb.	4 1/2c
Three-crown Standard Loose Muscatels, # lb.	4 1/2c
Four-crown Standard Loose Muscatels, # lb.	4 1/2c
Bleached Thompson Seedless—	
Extra Fancy, # lb.	11 c
Fancy, # lb.	10 c
Choice, # lb.	9 c
Standard, # lb.	7 1/2c
Prime, # lb.	6 1/2c
Thompson Seedless, # lb.	6 1/2c
Sultanas, Fancy, # lb.	8 1/2c
Choice, # lb.	7 1/2c
Standard, # lb.	6 1/2c
Prime, # lb.	6 1/2c
Seedless, # lb.	5 1/2c

#### CITRUS FRUITS.

New crop Navel Oranges put in an appearance this week from Arcadia, and on account of their novelty, some of desirable size sold in a small way up to \$4.50 per box. Valencia's of last crop continue to be offered at easy figures and move slowly. Lemon market is without particular change, offerings being liberal and demand far from brisk, despite the fact that choice Limes are in light stock and prices for same have been further advanced.

Oranges—Valencia's, # box.	1 50 @ 3 50
Lemons—California, select, # box.	2 75 @ —
California, good to choice.	2 00 @ 2 50
California, common to fair.	75 @ 1 75
Limes—Mexican, # box.	6 00 @ 6 50

#### NUTS.

A few new Chestnuts arriving from Stockton section were placed in a small way at 15c. Walnuts are moving eastward in carload lots at prices lately fixed by the Growers' Association. Almonds are being in the main steadily held, choice I X L's being difficult to secure under 11c in carload quantities at primary points and in some instances are held above this figure. Business doing in Peanuts is of moderate volume and at generally unchanged values.

California Almonds, shelled.	18 @ 22
California Almonds, paper shell, # lb.	12 @ 13
California Almonds, soft shell.	10 @ 12
California Almonds, hard shell.	6 @ 7
Cal. White Walnuts, No. 1 soft shell.	9 1/2 @ —
Cal. White Walnuts, No. 2 soft shell.	7 1/2 @ —
Cal. White Walnuts, No. 1 hard shell.	9 @ —
Cal. White Walnuts, No. 2 hard shell.	7 @ —
Peanuts, California, fair to prime.	4 1/2 @ 5 1/2
Peanuts, Eastern, hand-picked.	5 1/2 @ 6
Pine Nuts.	5 @ 6

#### WINE.

Virtually nothing doing in the way of transfers from first hands, and no likelihood of there being any noteworthy transactions until new wines of this year's vintage come upon the market. Values for last year's dry wines are quotable nominally at 25 @ 30c. per gallon wholesale. There is a fair movement outward from second hands, both by sea and rail, and a moderate volume of business on local account. Grapes continue in good request, with market firm at about same range of values previously noted, dry wine grapes selling mainly within \$25 @ 28 per ton for interior deliveries, and up to \$32 per ton in a small way in this city. Sweet wine grapes are running from \$10 @ 20 per ton, as to quality, variety and point of delivery.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks.	251,247	1,591,409
Wheat, centals.	189,959	992,989
Barley, centals.	410,343	1,693,588
Oats, centals.	25,693	331,772
Corn, centals.	2,145	17,305
Rye, centals.	2,230	12,265
Beans, sacks.	25,022	67,401
Potatoes, sacks.	36,742	386,990
Onions, sacks.	5,553	80,819
Hay, tons.	4,123	37,677
Wool, hales.	1,949	21,163
Hops, hales.	280	702

#### EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks.	172,160	1,193,016
Wheat, centals.	134,145	795,959
Barley, centals.	266,856	1,184,044
Oats, centals.	—	1,500
Corn, centals.	—	7,892
Beans, sacks.	295	2,171
Hay, hales.	6	777
Wool, pounds.	—	341,316
Hops, pounds.	2,300	79,200
Honey, cases.	2	1,447
Potatoes, pack's.	100	9,249

#### California Dried Fruit at New York.

NEW YORK, Oct. 2.—Evaporated apples, common, 5 @ 8c; prime wire tray, 8 1/2 @ 9 1/2c; choice, 9c; fancy, 9 1/2 @ 9 3/4c. California Dried Fruits.—Market quiet but fairly steady. Prunes, 3 1/2 @ 7c. Apricots, Royal, 8 1/2 @ 13c; Moorpark, 9 1/2 @ 14c. Peaches, unpeeled, 6 @ 9 1/2c; peeled, 11 @ 15c.

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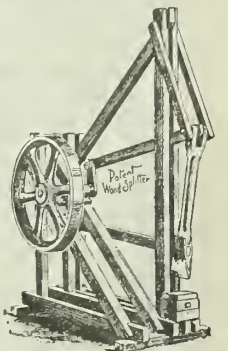
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## FRUIT MARKETING.

## The French Prune Crop.

TO THE EDITOR:—This letter from Consul Tourgee confirms prices on prunes quoted in his cable of Sept. 10th (see PACIFIC RURAL PRESS, Sept. 21, page 189) which were supposed by some dealers here to be inaccurate on account of the high prices quoted. The Consul now states that his prices on three sizes were quoted from consular invoices and the balance from known sales.

PAC. COM. MUSEUM, S. F.

PRUNES.—I have the honor to confirm cable of to-day in regard to prices of prunes as enclosed. The yield is still estimated all the way from 350,000 to 550,000 quintals. It will probably run between 360,000 and 500,000 quintals. The fruit is remarkably fine, there being few of the medium sizes and practically no small ones. The large ones are not yet fully ripe, and there are no quotations of the larger sizes, though a few have been sold. The first invoice of prunes sent to the United States some days ago was 36 fruit (32 American) at 106 francs per 50 kilos (110 pounds); 45 fruit (40 American) at 86 francs (\$16.60) per 50 kilos (110 pounds); 40 fruit (36 American) at 76 francs (\$14.67) per 50 kilos (110 pounds). No quotations are given for the larger sizes, and I have made my report of these from known sales. While the fruit is not fully ripe, enough has been sold to make a rate. I fancy the hesitancy to quote is in the hope of depressing the price.

This is the highest average for size of fruit that I have ever known here. The quality of the fruit is excellent, and it is said to be curing up "in great shape." The market is very firm, buyers numerous and eager, and sellers very coy. There is every prospect that prices will retain their present status, or nearly so, during the season, as the demand seems to be largely in excess of the supply at present.

The weather has been marvelously fine during the month of August, so that the prune crop which was expected to be at least two weeks later than usual is coming in quite as early as common. Under present conditions the market will be in full blast by the 20th of September. The competition with American fruit will be greater than usual because of the peculiarly fine quality and large size of the prunes from this district. I understand that large advance orders have been lodged from New York, Boston and Philadelphia, especially based on this prospect.

The attempt to work up a boom by manipulating the crop report, and so make a chance to work off the held-over stock, has been an absolute failure. There have lately been considerable sales of last year's stock to American dealers at about half the price of the new crop. The fact that they were held so long, and then put off at a makeshift price, shows that the scheme has failed.

The almost entire failure of the small sizes should give the preserving fruit market in Europe almost entirely to American prunes.

ALBION W. TOURGEE.  
Bordeaux, Sept. 10. U. S. Consul.

## The European Walnut Crop and Prices.

Special Consular Report Received by the Pacific Commercial Museum, San Francisco, Sept. 25.

Consul Robert P. Skinner writes from Marseilles Sept. 5: The condition of the walnut crop at this time is considered good, and it is expected that the yield will be an average one, which means about 20,000 bales, or 4,840,000 kilos (kilo 2½ pounds). Up to this time no damage has been wrought by drought, frost or excessive rains, or otherwise by the elements. The indications are that the price of Mayettes on the opening of the market will be from 58 to 60 francs (\$11.19 to \$11.58) per 220 pounds, first cost. There are some speculative brokers who have offered to sell short at the above prices for Mayettes, indicating that the conditions for a good crop are fair and improving. Freight rates from Marseilles to New York, from 110 francs to 120 francs per 100 kilos (\$21.23 to \$23.16 per 220 pounds). If shipped by way of Havre, merchandise pays ocean freight per cubic measure, the rate being 15 francs (\$2.89) per cubic meter, and, taking into consideration the railway freight, the rate from Marseilles to New York would be equal to about 120 francs (\$23.16) per 220 pounds.

Consul A. W. Thackara writes from Havre Sept. 7: I sent you last evening the following cable: Opening prices new walnuts (Grenoble, Mayettes), 13.5 cents per kilogramme f. o. b. steamship Havre; Marbots, first choice, 10.75 cents per kilogramme; Cornes, 8.75 cents per kilogramme. The two latter prices f. o. b. steamship Bordeaux.

The actual market prices are as follows; Grenoble, 70 francs (\$13.51) per 100 kilos (220 pounds) f. o. b. Havre; Marbots, 55 francs (\$10.615) per 100 kilos f. o. b. Bordeaux; Cornes, 45 francs (\$8.885) per 100 kilos f. o. b. Bordeaux.

All the reports I have received agree in saying that the crop will be equal to that of last year and of good quality. One dealer in Grenoble estimates the crop of Grenoble walnuts, including Mayettes, Parisiennes and Franquettes, as about 30,000 bags of from 110 to 120 kilogrammes each. (A kilogramme is 2½ pounds.)

The freight rates of walnuts from Havre to New York by the French line are 35 francs (\$6.755) per ton of 1000 kilogrammes on fast express steamers; 20 francs (\$3.86) per ton by the single-screw steamers Gascogne, Bretagne, etc., and 11 francs (\$2.123) per ton by the cargo boats.

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**THE VETERINARIAN.**

Answers by Dr. Boomer.

**SWELLING ON ABDOMEN.**

TO THE EDITOR:—I have a two-year-old heifer and a lump has come about 6 to 8 inches in front of the udder. It is about as deep as a postal card and the length about the same. There is no pain and it does not interfere with her eating. It is hard on the sides, but the bottom of it feels soft. She calves in October; and as she is of nervous temperament, I do not care to pull her about very much. It has been there about two weeks and is not increasing nor decreasing. I thought of putting a biniodide blister on it, thought to one.—W. J. B. MARTIN, Redding.

If the enlargement was of long standing and hard to the touch, your biniodide blister would be indicated; but as it feels soft, I would advise you to paint it thoroughly with the tincture of iodine once a day for about three, then treat it as you would a blister. Repeat the dose after a rest of three days.

**SWELLING OVER BREASTBONE.**

TO THE EDITOR:—I have a work mare, eight years old, which has a large swelling just over the breastbone. It has been there a few days and is some 8 or 9 inches long and as thick as one's upper arm. There are no signs of a sting, and it does not seem painful or in any way to trouble her. It is firm to feel, but not really hard. Her collar fits well, and indeed the swelling is some way below it, being partly between forelegs. She is in good condition. Can you tell me its probable cause, and what I can do for it, letting me know if she can be worked during treatment?—H. M. GERRARD, Skyland.

The cause is probably a bruise, and the chances are that it will disappear shortly. Work her by all means if otherwise in good condition.

J. B. BOOMER, M. D. V.  
510 Van Ness Ave., S. F., Cal.

**Vaccination for Black Leg.**

Black leg is one of the most dreaded diseases affecting cattle. Vaccination of the animals has proven to be the most effective preventive treatment yet discovered, and its use and what is known of its value were discussed by Dr. John R. Mohler, of the U. S. Bureau of Animal Industry, in a paper prepared at the request of Secretary F. D. Coburn of the Kansas Board of Agriculture, and presented at the Board's recent meeting.

Dr. Mohler said, in part:

"Black leg is an infectious disease, caused by a specific germ which is almost universally present in the ground in all districts where the disease is known to prevail. This microbe, upon gaining entrance into the system, usually through punctured wounds made by briars or stubbles, develops rapidly and causes hemorrhagic, bluish-black, gas-filled swellings. The course of the disease is very rapid, and the animal usually dies within twenty-four hours after the appearance of the first system.

"By vaccination we understand the injection into the system of a minute amount of attenuated or artificially weakened black leg virus, for the purpose of producing a mild and clinically unrecognizable case of black leg. If all animals were equally resistant to the disease or equally susceptible to it, a happy medium could easily be decided on, but the great difficulty in the preparation of the vaccine lies in the fact that no two individuals possess the same power of resistance. In fact, some animals, fortunately a very small number, are so susceptible to the disease that the injection of the vaccine results in the development of a fatal

case of black leg; but statistics from this country, as well as from Europe, show that these cases amount to less than one in 2000 among the several million animals which have been vaccinated during the past fourteen years; that is, since vaccination for black leg was first introduced.

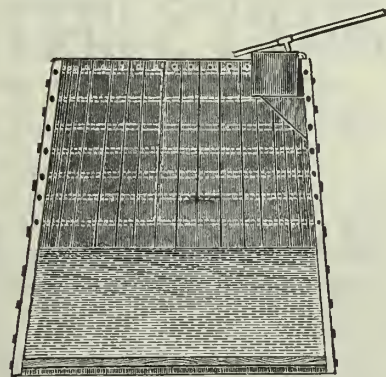
"As to the protective value of vaccine, we are in receipt of more than 500 complete reports from Kansas stockmen, covering their experience with black leg in general and with vaccination in particular. A tabulation of these reports shows that the estimated loss from black leg in unvaccinated herds amounts to 10 1/2%, while the actual loss of animals due to the postponing of vaccination until the disease had appeared in these 500 herds amounted to 2360 head, or 3 1/2% of the total number of cattle. This means a loss last year of at least \$35,000, which could easily have been avoided if the cattle owners in the infected districts would have vaccinated their young stock previous to the beginning of the black leg season.

"These figures speak for themselves, and it is to be hoped the time will come when every cattle owner will come to the conclusion that vaccination is a duty he owes to himself as well as to his neighbors, and that the inconvenience in obtaining vaccine and applying it to his cattle is outweighed a thousandfold by the benefits derived from its use."

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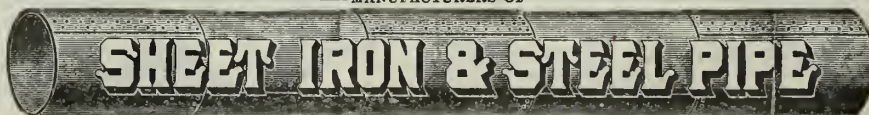
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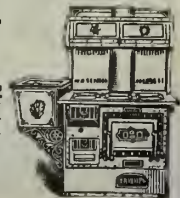
**Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.**  
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Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with Asphaltum

**\$50.00 RANGE FOR \$25.00**

TO INTRODUCE THE

**WILLARD STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/4 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. **WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Dept. 8.** Will ship U. O. D. with privilege of examination.



**Grain**

lodging means straw weakened because the fertilizers are not well balanced.

**Potash**

in fertilizers prevents this and improves the grain.

OUR BOOKS are not advertising catalogues, but are scientific publications, written by the most eminent agricultural authorities. We mail them FREE to all farmers upon request. Send your name and address to

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**MEYER, WILSON & CO., San Francisco, Cal.,**  
are Sole Agents for the Pacific Coast.

**Phylloxera-Resisting Grape Cuttings and Plants--**

**RIPARIA**

Address **BUSH & SONS,**  
BUSHBERG, MO.

**Prune Dip.**

"Greenbank" Pure 100% Caustic Potash and 98% Powd. Caustic Soda.

**T. W. JACKSON & CO.,**  
Sole Agents, - No. 123 California Street  
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**LEE D. CRAIG,**

Notary Public and Commissioner of Deeds,  
316 MONTGOMERY STREET,  
Bet. California and Pine, SAN FRANCISCO, CAL.



### The Malaga Jordan Almond Crop.

The first sales of Jordan almonds of this year's crop have been effected in Malaga, at prices ranging from 27s to 32s (\$6.56 to \$7.80) per arroba of twenty-five pounds.

Few almonds were offered, and these were only of the smallest to medium sizes. The purchasers were local merchants, who will hold the almonds for export. Some of the exporters have issued circulars announcing that there is an unusually small crop of Jordans, and predicting even higher prices than the unusually high ones of last year. Those who are in the best position to know, however, state that the crop is as good as, if not better than, that of last year. This would mean from 80,000 to 85,000 boxes of twenty-five to twenty-eight pounds each. Unfortunately, there is always great difficulty in knowing anything positive about the crop of Jordan almonds, because the growers, who are in the main peasants, living on the hills and in valleys, refuse to give correct information. One thing is sure: however abundant the crop may be, they are certain to shrug their shoulders and say it is the opposite.

Last year there was a valid reason for the high prices paid for Jordan almonds. All over Europe the almond crop failed and dealers everywhere felt the necessity of buying the much-sought "Jordans" quickly. Hence the unusual high prices. This year there is an extraordinarily large crop of almonds throughout Europe, and particularly in the famous Bari district of Italy, which is the principal seat of the European almond market. None the less, the Jordan almonds—which, as a matter of fact, do not exist outside the provinces of Malaga, Granada and Almeria, and are exported only from Malaga—are being marketed at opening prices even a little higher than the previously unheard-of rates of last year. It would seem, then, that these almonds must be considered as something apart from all others. It remains to be seen whether or not the demand, which comes almost exclusively from England and the United States, will be sufficiently active to keep up the remarkably high opening prices. BENJ. H. RIDGELY.

Malaga, August 21, 1901.

### Frozen Meat Exports of New Zealand.

Consul-General Bray of Melbourne, under date of August 4, 1901, transmits the following statement of frozen meat exported from the colony of New Zealand for the years ended June 30, 1901 and 1900:

Description.	1899-1900.	1900-1901.
Pounds.	Pounds.	Pounds.
Mutton .....	128,822,167	97,194,054
Lamb .....	54,160,014	51,257,841
Beef .....	31,854,651	29,728,028

As will be seen, mutton decreased by 31,628,113 pounds, lamb by 2,902,173 pounds, and beef by 2,126,623 pounds; and as no increase has occurred in the exports of frozen meats from New Zealand during the past two or three years the impression prevails that the productivity of the colony in that direction has found its limits.

Cordially Appreciated.

At a regular meeting of the Board of Directors of the Chamber of Commerce of Santa Barbara county, the following resolution was unanimously adopted by said Board, to wit:

Resolved, That the thanks of this Board be and they are hereby extended to the management of the PACIFIC RURAL PRESS for the appreciative articles on Santa Barbara city and county, recently appearing in said publication, together with the best wishes of this Board for the future prosperity of the PACIFIC RURAL PRESS.

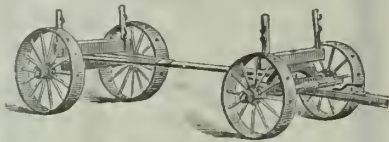
C. M. GIDNEY,  
Sec'y Chamber of Commerce.  
Santa Barbara, Sept. 26.

### Tools for the Philippines.

Lend-a-Hand clubs are organized of charitable people who have banded themselves together for good work. In their circular for Sept. 1 we find a report of a committee which had been at work collecting agricultural implements for shipment to the Philippines and we are not surprised to find that thanks are returned to the Deere Implement Co. of San Francisco for "repeated courtesies."

### Farm Wagon only \$21.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30-inch wheels with 4-inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

### FANCY POULTRY.

We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators. Wire Netting. Blooded Fowls and Poultry Appliances generally. Publishers of the Pacific Coast Poultryers' Hand-Book and Guide. Price 40c, postpaid.

PACIFIC INCUBATOR CO.,  
1317 Castro Street, Oakland, Cal.

### WANTED.

About two carloads of healthy, thrifty Calves or Yearlings.

Address, giving particulars of breed, age, condition, price, and shipping point,

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### Cocoanut Oil Cake.

THE BEST FEED FOR STOCK, CHICKENS AND PIGS.

For sale in lots to suit by

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San Jose, California,

Importers and Breeders of **ANGORA THOROUGHbred GOATS.**

Flock founded on our own selections from first importations into the United States.

The only New Blood received in the United States for 25 years is from our two importations FROM SOUTH AFRICA, and

OUR RECENT IMPORTATION FROM ASIA MINOR. Don't Buy Doubtful Stock.

100 Fine Registered Yearling Bucks for Sale.

Catalogue Free. A neat booklet on the culture of Angora Goats for 25 cents, post paid.

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FOR SEASON 1902.

Every horticulturist should have my 28-page illustrated catalogue, which tells all about citrus trees; the old sorts and the tested new sorts, also table for planting trees, sowing seed, etc. Your address on a postal will bring one. Address

R. M. TEAGUE, Prop.

SAN DIMAS NURSERIES,  
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### Improved Fresno Scraper.

5-FOOT. WEIGHT, 300 LBS.

NEW STOCK. NEW PRICES.



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Tells all about it.  
SAMPLE COPY MAILED FREE.

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#### HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 5-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1896. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER SAXE & SON**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**JERSEYS, HOLSTEINS & DURHAMS.** Bred specially for use in Dairy. Thoroughbred Hogs, Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

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**JERSEYS**—The best A.J.C.C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

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**WILLIAM NILES & CO.**, Los Angeles, Cal. Nearly all varieties chickens, geese, ducks, peafowl, etc.

**SANTA TERESA POULTRY FARM**, Eden Vale, Santa Clara Co., Cal. Illustrated catalogue with show record for 1900, free. Agents Eclipse Aluminum Leg Bands; sample 2 cts.

**FOR THOROUGHbred FOWLS** in small lots, address Cottonwood Farm, Pleasant Grove, Cal.

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**BRONZE TURKEYS.** Ed. Hart, Clements, Cal.

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**BERKSHIRE HOGS**, headed by the great boar Artful Lee 52630. S. B. Wright, Santa Rosa, Cal.

**CHAS. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

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Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are high. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

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SLEEPY HOLLOW RANCH, SAN ANSELMO, MARIN CO., CAL.

ALL THE LEADING FAMILIES OF THE BREED.

Every Sire directly imported from Herds of the Greatest Eastern Breeders.

Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams.

Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.

## ORDERS ARE COMING IN

for spring pigs. We have shipped a few and have orders entered for others to be shipped when old enough. We sold two of the three hogs advertised the past few weeks and now offer the remaining Poland-China sow farrowed June 25, 1900, sired by Missouri's Best U. S. 46355 and out of Happy Queen 134192 sired by the great \$4000.00 boar Happy Union 41111. Write us for particulars.

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TOOK ALL SWEEPSTAKES AT STATE FAIR 1901.

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Young Stock for Sale. LOVELOCK, NEVADA.

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### Red Polled Cattle.

Color Deep Red. Both Sexes for Sale.

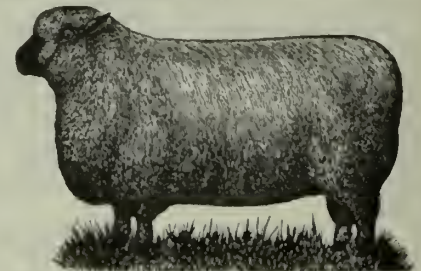
Address all communications PETALUMA, SONOMA CO., CAL.



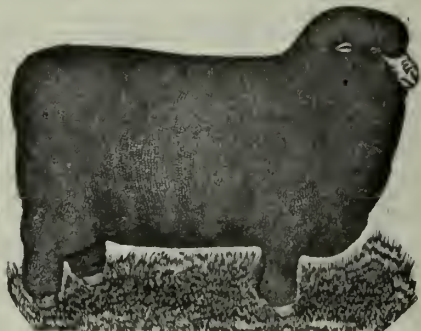
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They were all imported from England, or bred direct from imported stock.



We have also bred American Merinos—Hornless Sheep—for 30 years. They are a large sheep without wrinkles. Rams will produce 20 to 25 pounds of long, white wool yearly. Sheep of both sexes for sale.



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Shipping Points: PETALUMA AND SANTA ROSA, SONOMA CO., CAL.

DEWEY, STRONG & CO.,

Patent Agents, S. F., Cal., and Washington, D. C.



New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR WEEK ENDING SEPTEMBER 17, 1901.

- 682,683.—TIMBER DOLLY—J. L. Bayley, Spokane, Wash.  
682,902.—SPRAY PUMP—J. Bean, Los Gatos, Cal.  
681,010.—POWER PLANT—G. A. Bobrick, Los Angeles, Cal.  
682,976.—COASTER BRAKE—Denzer & Hult, Hood River, Or.  
682,614.—SAW TEETH—E. E. Harris, Aberdeen, Wash.  
682,617.—BED COVERS—J. Herbs, Redlands, Cal.  
682,621.—ELECTION BOOTH—F. M. Humphrey, Pendleton, Or.  
682,622.—CAR—F. M. Humphrey, Pendleton, Or.  
682,938.—HORSESHOE'S KNIFE—G. C. Ingram, South Tacoma, Wash.  
682,873.—HOSE COUPLING—F. D. Joy, Glendora, Cal.  
682,940.—BOOT HEEL—C. E. Keller, Los Angeles, Cal.  
682,944.—TURNABLE—T. F. Langley, Corvallis, Or.  
682,402.—INCUBATOR—J. H. Madison, Petaluma, Cal.  
682,735.—PACKING CASE—M. McRoberts, S. F.  
682,814.—FRUIT CLEANER—F. E. Proud, Orange, Cal.  
682,765.—STEAM BOILER—Stetson & Thomas, San Salito, Cal.  
682,892.—TOOTH PICK—Emma J. Thurston, Deming, Wash.  
682,967.—OAR LOCK—White & Snyder, Marshfield, Or.  
682,658.—SOLAR HEATER—J. M. Wishart, Oakland, Cal.

Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

COMBINED HARROW AND CRUSHER.—No. 681,849. Sept. 3, 1901. E. S. Gordon, Santa Rosa, Cal. This invention is especially designed for the breaking up of certain soils, such as adobe, and generally those of a clayey character. It consists essentially of a series of vertically actuating teeth or picks which passing over the ground, act not only to pierce the clods but crushes them, thus serving as harrow teeth as well.

ROAD CARTS.—No. 681,496. Aug. 27, 1901. Wm. A. Cowley, Benicia, Cal., assignor to Baker & Hamilton, San Francisco, Cal. This invention relates to improvements in the construction of road carts and particularly as to the manner of suspending the body so as to obviate the so-called "horse motion," so disagreeably noticeable in most vehicles of this type. It consists, first, in attaching the shafts directly but pivotally to the axle, and, secondly, in connecting the front of the body by a torsional spring connection to the shaft.

AUTOMATIC WATER ELEVATORS.—No. 682,378. Sept. 10, 1901. J. E. Armstrong, Santa Cruz, Cal. The object of this invention is to provide a mechanism by which a small flow of water having a sufficient elevation may be collected into a receiving tank and thence delivered into an endless chain of peculiarly constructed buckets, which chain passing over a drum at the upper end acts to drive a pump which takes its supply from the same receiver and lifts a portion of the water arriving from the same source of supply to an elevation above the receiver and the source.

PUMPING APPARATUS.—No. 681,628. Sept. 3, 1901. Gustave A. Krohn, Coarse Gold, Cal. One half assigned to E. H. Cox, Madera, Cal. This invention relates to a pumping apparatus, and is especially designed to be operated by steam power, but it may be driven by any suitable or convenient power. It consists in a novel construction of a pump cylinder having double concentric walls, with an inlet valve at the lower part of the inner cylinder, a valve piston, the piston rod of which is surrounded by a hollow chamber, which is reciprocable through a stuffing-box on the top of the main outer cylinder. There is also a chambered base plate to which the cylinder is removably attached, said base plate forming also the support for the discharge pipe.

PERHAPS the oddest feature of the Pan-American cattle show was a consignment of wild range steers direct from the Canadian Northwest. They are sent as an advertisement of what can be accomplished in that country without shelter or additional feed. Some of these animals are plenty fat enough for beef, and they are all large and heavy. Their weight will range from 1300 to 1800 pounds each. Cowboys accompanied them with their plains outfit of ponies and lassoes, but they deemed it necessary to build a wire corral to extend from the cars to the enclosures, as they could afford to take no chances with such wild stock.

STATE OF OHIO, CITY OF TOLEDO, ss.  
LUCAS COUNTY,

FRANK J. CHENEY makes oath that he is senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886.

{SEAL}

A. W. GLEASON,  
Notary Public.

Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

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Sold by Druggists, 75c.  
Hall's Family Pills are the best.

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School of Practical, Civil, Mechanical, Electrical and Mining Engineering,  
Surveying, Architecture, Drawing and Assaying.  
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Open All Year. : A. VAN DER NAILLEN, Pres't.  
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COMPLETE BUSINESS EDUCATION \$50.

WRITE FOR INFORMATION.

GLENN RANCH,  
Glenn County, :::: California,  
FOR SALE  
In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

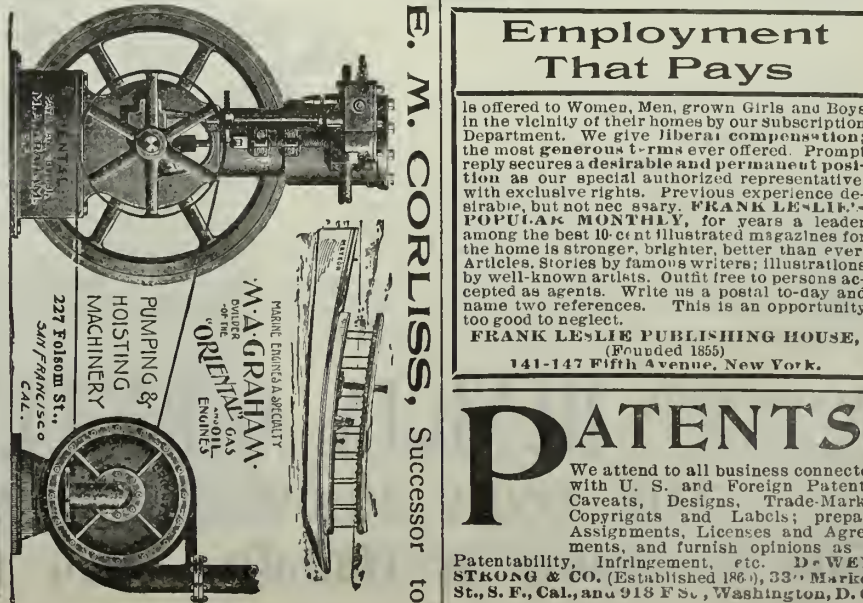
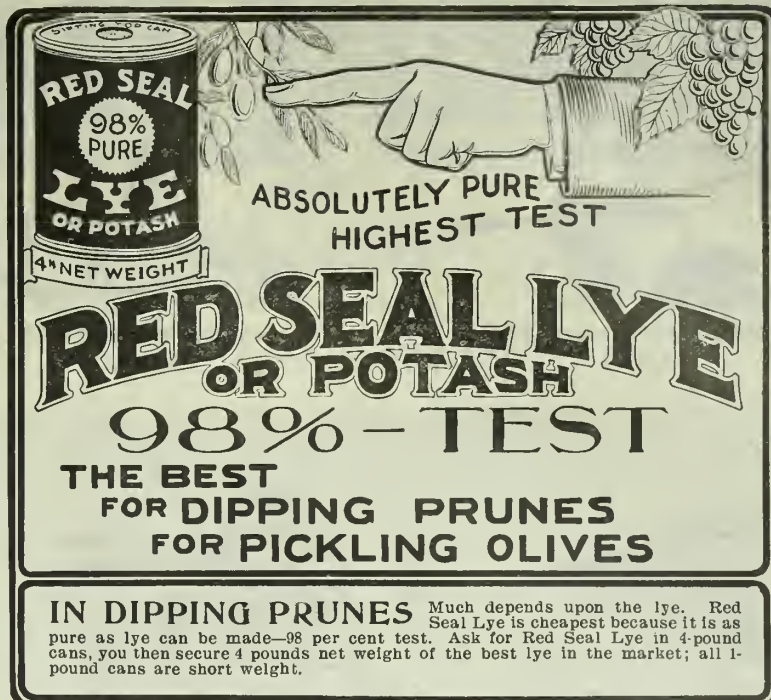
Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

Telephone Main 199.

Blake, Moffitt & Towne,  
DEALERS IN PAPER,

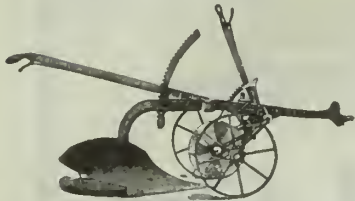
Nos. 55-57-59-61 First St., San Francisco, Cal.

BLAKE, MOFFITT & TOWNE, Los Angeles.  
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Hooker & Co.  
16 & 18 DRUMM ST.  
SAN FRANCISCO.



CANTON SINGLE FURROW WHEEL  
PLOW.

Hooker & Co.  
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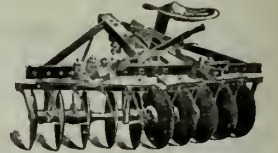


CANTON DOUBLE DISC  
PLOW.

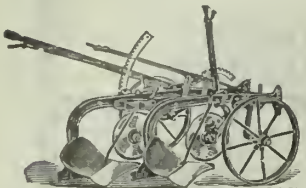


KENTUCKY DISC DRILLS.  
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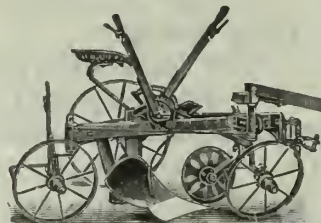
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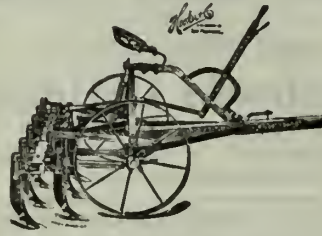
PACIFIC REVERSIBLE  
DISC HARROWS,  
4-5-6 Foot.



CANTON CLIPPER GANG,  
TWO FURROW.



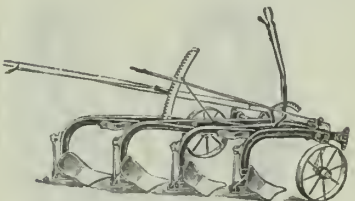
CANTON CLIPPER TRICYCLE  
SULKY.



CANTON NEW MODEL ORCHARD  
CULTIVATOR.



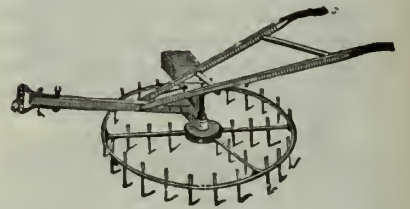
PACIFIC REVERSIBLE DISC HARROW



CANTON FOUR FURROW GANG.



CANTON "U" BAR LEVER HARROWS.  
3/4 in. Square Teeth. Others have 1/2 in.



CALIFORNIA CIRCULAR HARROW.

Write for Catalogue  
and Description.

**HOOKE & CO.,**  
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FARM IMPLEMENTS AND VEHICLES.

Our Prices are  
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# THE NEW BENICIA ROTARY DISC PLOW IS REVOLUTIONIZING THE PLOW WORLD.

## THE GREATEST INVENTION OF THE AGE.

### READ WHAT THE FARMERS SAY:

MESSRS. BAKER & HAMILTON,  
SAN FRANCISCO, CAL.  
Agricultural Department.

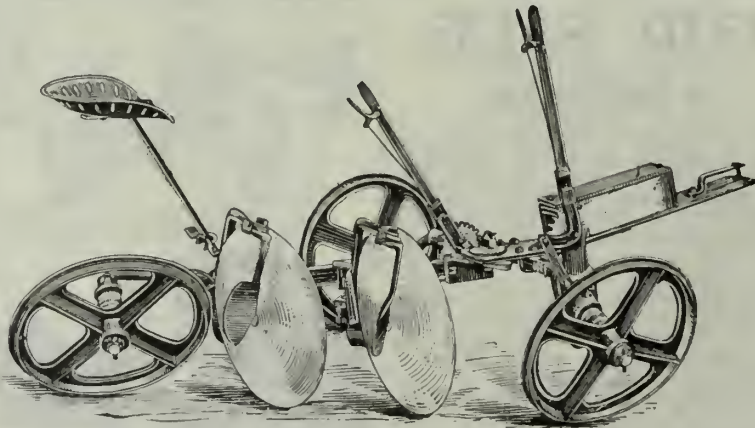
[COPY]

ROSEBURG, OR., Sept. 7, 1901.  
"You will have to show me," is the expression I used when a representative of Baker & Hamilton said he could plow my field with the Benicia Disc Plow. It had not been plowed for two years and no moldboard plow could be made to operate in it. Well, he showed me. He plowed nine inches deep, cutting two furrows each ten inches wide, and four ordinary horses pulled it easily. If it were possible to get a moldboard plow into this ground it would take eight horses to pull it, and then the moldboard plow would turn it over in large chunks that a man could not lift. This plow pulverizes it. This statement is correct. I was present and saw it.  
P. MURPHY.

MESSRS. BAKER & HAMILTON,  
SAN FRANCISCO, CAL.  
Agricultural Department.

[COPY]

ROSEBURG, OR., Sept. 7, 1901.  
Gentlemen:—Yesterday I witnessed a test of the Benicia Disc Plow. I thought we were putting the agent into ground that he could not open a furrow in, out our failure was his success. It is certainly the most wonderful plow ever built, and the farmers of Oregon can now plow their ground when it should be plowed, at a minimum expense compared with the old method. I can cheerfully recommend the Benicia Disc Plow, and if you need a plow you will buy nothing else after you see it work.  
S. D. EVANS.



MESSRS. BAKER & HAMILTON,  
SAN FRANCISCO, CAL.  
Agricultural Department.

[COPY]

ROSEBURG, OR., Sept. 7, 1901.  
Gentlemen:—The Benicia Disc is the most wonderful plow I ever saw in the field. If a machine does half what the agents usually claim for it, farmers are generally satisfied. This plow has done all it was represented to do. Now that I have seen it I am forced to believe it. I want one as soon as you can get it here.  
JACOB W. JONES.

VINA DISTILLERY,  
VINA VINEYARD,  
VINA RANCH,  
MESSRS. BAKER & HAMILTON,  
SACRAMENTO, CAL.

[COPY]

VINA, CAL., June 18, 1901.  
Gentlemen:—Referring to your favor of the 14th would state that I am making arrangements to-day to start up the disc plow again in order to see what I can do with it with the three gangs on. Its execution was certainly a marvel to us all not only in the work performed, but in lightness of draft. It plowed through horehound and wire grass, the latter forming a perfect sod, without the slightest difficulty. One advantage over other discs is that it turns the ground more perfectly. Respectfully yours,  
(Signed) T. H. RAMSAY, Mgr.

VINA DISTILLERY,  
VINA VINEYARD,  
VINA RANCH,  
MESSRS. BAKER & HAMILTON,  
SACRAMENTO, CAL.

[COPY]

VINA, CAL., June 20, 1901.  
Gentlemen:—We have added the third disc to the plow and find that it takes land better than with two discs. The plow covers perfectly running at a depth from five to six inches in thick Johnson grass as high, and even higher in places, as the backs of the horses, and I have never seen it clog under these conditions. It also stays to the ground, crossing hard places where a moldboard plow would jump out. It leaves the ground in better condition than it would be if plowed with an ordinary plow and then harrowed. Respectfully yours,  
(Signed) T. H. RAMSAY, Mgr.  
Supt. Leland Stanford Ranch, Vina, Cal.

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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 15.

SAN FRANCISCO, SATURDAY, OCTOBER 12, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### The Date at the Pan-American.

It is interesting to know that Pacific coast dates are among the exhibits at the Pan-American Exposition and that Arizona is entitled to the credit of making this unique display. Prof. H. E. Van Deman, who is a good friend of Pacific coast fruit progress and has done much to promote it, gives an interesting sketch of this display, which attracted so much attention at Buffalo. He holds the belief that there are regions in California and Arizona where the date can be grown perhaps as well as anywhere in Europe, Asia or Africa, and steps are being taken to undertake its culture on an extensive scale. Some twelve years ago when in the government service in Washington city, Prof. Van Deman imported plants which were taken up as suckers from some of the best bearing trees in Algeria, Arabia and Egypt, and had them planted near Phoenix, Ariz., and several places in California, where they are now in bearing condition. This is the only way in which the date can be properly propagated, because to grow seedlings would be very uncertain as to which sex would be produced, and the varieties would not likely be of much value, as is the case with seedlings of other kinds of fruit. But when suckers or slips are taken from the base of bearing trees, they are sure to bear fruit of exactly the same character as that grown upon the original trees. This is the method always followed in date-growing regions. The United States Department of Agriculture, under its present management by Secretary Wilson and his associates, is following up this idea by importing small plants from the regions just mentioned and plantations are being established in the arid regions of Arizona and California. The soil and climate best suited to date trees are just such as are found in the hottest parts of those States, where rain rarely falls and where the soil is quite sandy, with abundant opportunity to irrigate. The Arab saying is that "the date tree needs fire at the head and water at the feet," which means that the climate should be very hot and dry, but that the soil should be moist. Although a little

fruit has been produced on trees in various parts of the sections mentioned, yet there has never been any of it dried and packed until last year at the Agricultural Experiment Station at Phoenix, Ariz., where a number of varieties were thus treated, and a case of this fruit is on exhibition in the Horticulture Building at the Pan-American Exposition. This marks a notable event in date culture in the Western

Hemisphere. There is no good reason why we should not produce in this country all the dates which our people need, and it is a matter of great satisfaction to those who are interested in this line of work to note the progress which is being made.

### Picturesque Residence in Napa Valley.

We have indulged somewhat freely of late in views of the picturesque in southern California and it is only fair to turn the glance northward. In the older settled regions of central and northern California there are many places fit to win admiration and to demonstrate how beautifully the country lends itself to the development of the delightful in rural homes. All around the bay of San Francisco such places are found to teach the newer comer what he can do with taste and ample means. Unsurpassed in picturesqueness in the Napa valley and one of the noted places in the valley is Oak Knoll, the residence of Mr. Drury Melone, which is shown in the engravings on this page. The site was located and improved by the late R. B. Woodward, whom old Californians will remember as a man of great energy and enterprise who figured largely in San Francisco affairs, and found in his rural retreat in the Napa valley not only respite from care but recreation. Since his death, Mr. Melone has made the place his residence and has maintained and improved it in full harmony with the designs of the founder and by exercise of his own well known taste in esthetic affairs. Oak Knoll is one of the famous spots in the valley and the charming pictures show that it is fit to please the appreciative and discriminative visitor.

FRUIT WASTES are being each year utilized to a large extent. With apricot pits selling above \$10 per ton there is seen to be much more in the drying than formerly. From San Jose it is reported that the making of brandy from fruit refuse is rapidly increasing in Santa Clara county and the product for 1901 is estimated at 50,000 gallons.



View on the Grounds of the Melone Residence, Napa Valley.



Residence of Mr. Drury Melone, Napa Valley.



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E. A. WICKSON, ..... Horticultural Editor.

San Francisco, October 12, 1901.

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## The Week.

The greatest activity prevails since the strike was called off. All sorts of wheels are turning at high speed and grain, hay and other produce, not to speak of all kinds of merchandise, are moving as fast as possible to the places which have been waiting for them for many weeks. Every one seems to have become utterly weary of the strike and the conclusion seems to be that it has helped no one and has hurt many. It is probable that a repetition of the experience will not be soon invited. The weather holds fine and favors the flight of produce to shelter or to transportation, and every bright day happily lessens the chances of serious losses. Late fruits are also favored by what promises now to be a bright October.

Spot wheat is still rather slow and futures are vacillating. Buying in Chicago for France has brightened the outlook a little and has given options everywhere an uplift, but its degree is not measured. Only one wheat cargo has cleared this month so far. One cargo of barley has also gone forward. Barley is loading from previous purchases and not many new sales are being made. Oats are quiet and steady, owing to Government requirements, but supplies are coming rather more freely from the North and there is said to be plenty there. Corn is still scarce and high, but new California is nearly due to arrive. Beans are unsettled; most kinds are lower, owing to free arrivals of new beans, and the price of Limas is being cut somewhat. Bran is easier and lower, but is holding up better than other feedstuffs. Hay receipts were heavy a few days after the end of the strike, but they have slackened again. Some hay is going into storage, and prices are not changed by the movement. Beef is unchanged, but mutton is a little easier for wethers. Veal is weak. Hogs are barely steady; some packers call them weak, but prices are about the same. Some hogs are arriving from Utah. Fresh butter is rising rapidly. Cheese is steady, but inactive. Fancy eggs have advanced, but common fresh eggs are selling as low as eggs from cold storage. Poultry is depressed, as there is an excess of Eastern stock, which is dragging. Potatoes are slack for shipping, but the better grades are selling fairly for local use. Onions are holding up well; some are going to Australia. Lemons are very quiet and favor buyers. A few grape fruit are selling slowly. Good apples sell fairly. Choice pears are scarce and peaches are nearly out. There are plenty of

table grapes and rates are easier, but wine grapes are higher. Dried fruit is quiet. Eastern buyers are holding back and local jobbers are loaded and more anxious to sell than to buy. Prunes are unsettled. The California Cured Fruit Association has cut the price of old-crop prunes to a 3-cent basis. Local packers say this takes the market away from them. Raisin futures are selling at cut rates, but there seems to be some question about delivery at the prices made. Almonds are said to be offering at concessions. Honey is steadily held and little doing. Hops are in fair inquiry at prices which seem low to growers—say from 2 cents to 3 cents below their ideas. Wool is steadily held, but there seems to be little here that is desirable.

A fatal disease among swine has been causing great losses in the upper Sacramento valley for several months and the aggregate destruction of property reaches high figures. The growers have now taken promising steps toward learning definitely what is the disease and the course of action which should be followed for its reduction. A large meeting of swine growers covering representatives from four or five contiguous counties was held in Red Bluff last week and an appeal was made to the agricultural department of the State University for investigation and advice. Dr. A. R. Ward, the newly elected veterinarian of the University, went at once to the affected region and is now pursuing the investigation and has reason to expect definite results. Another general meeting of the swine men will be held on October 19th, at which Dr. Ward will be present and report his conclusions. The swine growers have taken the right course in this matter. There is too much disposition in various localities to cover up their troubles for fear of incurring a bad name. The better way is to bring these troubles right out in the light and cure them by well chosen and energetic measures.

Speaking of wheat buying for French account at the Eastern centers makes it pertinent to note a prospective deficiency in that country. Consular reports just received say that this year's yield in France will not be over 292,314,000 bushels. Others figure as small a supply as 246,906,000 bushels, and a deficiency to come from abroad of 99,330,000 bushels, the same as in 1897. The prospect for American wheat grows continually better. Against its importation there is no prejudice on the part of the mill owners. The residue of the wheat is in demand for domestic animals, and the grinding of it gives employment not only to the mills but to the many poor people who would go without work if flour were imported instead.

The pork situation all over the country seems to be very strong. The Orange Judd Farmer of last week notes that hogs have continued to steadily advance until in Chicago they have reached \$7.40 per 100 pounds. This is the highest price paid since the summer of 1893, when they sold temporarily at a higher figure. The present high prices appear to be on a sound basis and are justified by the selling price of hog product. The consumptive demand for provisions is so great as to continue to absorb the products about as fast as made, even at very high prices, and the prospect of any material accumulation of stocks is not bright. During two months of the drouth scare a large number of hogs were rushed to western markets, but such abnormal supply was taken care of readily by current demand for pork product. The early marketing of these hogs may be felt in lighter receipts until the end of November, so that the prospects are that high prices will continue for some time to come. The prosperous condition of the laboring classes of the country is such that they are able to consume meat liberally, even though it rules high in price. So long as this condition holds the price of hogs will be high, even without considering the certainty of a smaller supply late next winter and spring as a result of the corn deficiency.

The State Board of Trade has decided to make a complete collection of samples of every form of vegetation to which Luther Burbank's name as propagator can be attached and to keep a permanent exhibition of the same at the rooms of the Board in the Ferry building in this city.

## Improved Seed Wheat.

We are glad to note the fact that more interest is now taken in the possibility of increasing the wheat crop by the use of more prolific varieties than for many years past. Wheat has been so low in price that any unusual effort or expenditure seemed weariness to the thought of the wheat grower. Better machinery, which lessened the cost of production, commanded attention, because the gain by its use was so obvious and capable of demonstration; but to secure more prolific seed, or to take measures for restoring the fertility of the soil, seemed to be a rather indefinite recourse, and each grower, though willing that his neighbor should make the trial, shrank from doing anything himself. There has, however, been something accomplished of late, and the results are such as to invite wider interest and effort on the part of growers. Last year we noted the enterprise of Stockton growers, who had made a considerable importation of new seed from Australia, and now we have the experience of a Livermore grower, who has secured great improvement by the introduction of new seed from the State of Washington, and by combining his wheat growing with stock growing, so that he has his land on the up-grade in fertility, instead of the down-grade, which is sure to result from continuous wheat growing.

Several years ago Mr. Thomas D. Carneal of Livermore, who is conducting the large J. West Martin grain and stock ranch in that valley, began to practice a rational system of alternating grain cropping and pasturage on the heavy adobe lands which he had to deal with. This alternation proved excellent for the soil, but the thought occurred to Mr. Carneal that another progressive step could be taken by a change of seed and by further improvement through selection of seed, so that only good strong plants should be grown. Three years ago he secured seed wheat from Walla Walla. By the use of a suitable fan, all the small seed from the head-ends was blown out and only the largest, heaviest grains retained for seed purposes. This gave a very handsome seed sample.

The crop from the seed has been treated in the same way, and he has now the third crop from the original seed, each year the process of wind separation and the use of the heaviest kernels being continued. We have a sample of this year's product and its superiority is obvious. The fact that Mr. Carneal was awarded the grand prix for his wheat exhibit at the Paris Exposition last year shows the standing of the grain before foreign expert judges. A series of milling tests of it made by the Del Monte Milling Co. of this city shows that there has been a gain in milling qualities or in strength, as it is termed, as well as in general appearance. Mr. Carneal is convinced that there is a field in California for the production of fine wheat for seed purposes, and he proposes to proceed in this direction on the guaranty of the success he has thus far attained.

By his system of improving seed and improving soil by alternate cropping and pasturage, Mr. Carneal secured a yield this year of from thirty-five to forty bushels per acre. In his case the elimination of all the small light grains by the wind blast does not occasion the loss which might result from this operation to those who have no use for the small stuff, because he uses it for stock feeding. He feeds chop feed largely, and the small grain finely ground is thoroughly mixed with chopped hay, which is dampened to retain the flour that is stirred into it. This method of feeding wheat he finds very satisfactory, and in ordinary years it proves the cheapest feed for horses as well as horned stock.

Mr. Carneal believes that his rejection of the small seed from the upper end of the wheat head is as sound as the old practice of using for seed corn only the large central kernels of the ear and rejecting the tip seed. Not only is this true, but it has been demonstrated by the experiment stations that the largest seeds selected from the largest heads of wheat has produced from 50% to 100% more than the crop from the small grains from the small heads. Mr. Carneal is demonstrating on a large scale the truth demonstrated by scientific experimentation, and his results should be largely suggestive to our wheat growers of what can be done by using prolific seed and strengthening their land by a wise system of rotation.



QUERIES AND REPLIES.

From a Beginner.

To THE EDITOR:—I am just beginning, with very little knowledge, upon about fifty-two acres of land near Santa Cruz, and I am trying to find out what to grow for horses, cows, chickens and hogs to make a living for my family. The only thing I see them raising here is corn, but I found a good lot of black oat hay on the place. I dug some potatoes, but they were very small.—BEGINNER, Santa Cruz.

It is hardly possible to tell just what you ought to do without a fuller understanding of the situation than given. You should proceed somewhat carefully in the choice of crops, learning all that you can by observation and taking suggestions from the experience of others whenever you find a man in whose judgment and veracity you have confidence. It is altogether probable that corn must be your main reliance for summer feeding, and if you have land that grows good corn you are exceedingly fortunate. By the use of the silo you can easily preserve the surplus for feeding later in the year. For winter feeding, while the natural pasturage is perhaps slow to start, a piece of ground sown in the fall with oats and field peas together will give a large amount of forage which can be cut and carried to the stock. Mangel wurzels and Golden Tankard stock beets can also be grown to advantage; and if started in June or July in ground which retains sufficient moisture in the summer, or can be irrigated, will give you good roots for feeding from December onward throughout the winter. Probably your chief income would naturally come from cows and poultry, supplemented by such small fruits or garden truck as could be marketed to advantage in Santa Cruz.

Spiny Cockleburrs and Bull Thistles.

To THE EDITOR:—I send two thistles of some kind that are great pests to the island farmers. The one with the needles on produces a bountiful crop of burrs that are carried from place to place by stock of all kinds which graze among them. The other kind after blooming sheds a bountiful crop of seeds in the shape of cotton that is carried by the wind from place to place and is a terrible pest. There should be legislation to compel every land owner to destroy them. Please name each variety.—P. W. GARDINER, Isleton.

The first plant you mention is the spiny cocklebur (Xanthium spinosum). It is constantly cropping out in new places and spreading. It is a vicious-looking plant because of the long yellow spines or needles. These make it the most formidable-looking "thistle" we know of, but it is really less formidable than it looks because it does not have a running root and cannot spread underground like the Canada thistle, nor does it become a tumble weed and carry its own seeds all over the country as the wind blows it along. The seed is carried as burrs by stock, as you say, but if the plant is kept cut before maturing there will be no burrs to carry, so there is a practicable way to keep this pest down, and that is by keeping the ground and the roadsides clean. There should be ways to require this. The supervisors can require it on the roads and a strong public sentiment may force land owners to destroy it on private grounds.

The other plant you send is capable of reduction in the same way, for it also is dependent upon growth from seed. It is the bull thistle (Cirsium lanceolatum) of Europe and the Eastern States which has appeared during recent years in the San Francisco bay district, the lower part of the San Joaquin region, etc. It must be cut before flowering. It will not do to cut when in bloom because much seed may mature after the plant has fallen. It is always good practice with weeds to destroy them by cultivation or hoeing while the plants are small, but some people can only be aroused when they are conspicuous and there is danger of doing the cutting too late for effective seed destruction.

Soil Maps.

To THE EDITOR:—I have read in some paper that the Government is going to issue soil maps which will enable the farmer to determine just what crops will net him the largest returns. Printed in colors, it will convey information in the clearest and most easily comprehended manner imaginable. The map is to cover the whole of the United States and will be on such a scale that every ten-acre patch will be represented by a space 1/4 inch square. Farmers, however, will be able to procure charts of their own neighborhood on a larger scale, so that they can

arrange their planting in accordance with the suggestions which they convey. The work is done by townships to commence with, and these are put together to make counties, which are finally assembled in maps of States. These maps will show what class of agricultural industry any given locality is best adapted for—whether fruit raising, vegetable growing, dairying or general farming. What do you think of such a map and how soon will they be ready?—CARMELITA, San Francisco.

You have probably read a travesty on the descriptions of the soil work of the Washington Department of Agriculture or the anticipations of some one who may honestly think that such a thing is feasible. Good work is being done in soil investigation and some important deductions are likely to come from it, but notice that the account declares that this map will tell what crops can be grown "with the largest net returns." That, of course, includes cost of production and market price. Do you think you could get them on a map?

Irrigation of Deciduous Fruits.

To THE EDITOR:—Is it desirable to apply irrigation to prune trees very soon, say before the middle of October? The real point is whether or not French prune trees are now in such condition that water applied now would help them to mature their buds for next season or whether the trees advance their buds so far during the spring and summer that they have no need of assistance now, and would possibly be even better off if allowed to become dormant.—GROWER, Santa Clara.

It is not desirable to apply water at this time of the year to deciduous trees unless it is seen that the ground is so dry that the young wood will shrivel because of evaporation which the roots are unable to supply. If the leaves are still on the trees, or if the young wood is plump and fresh-looking, there is nothing to be gained by such late irrigation. The idea that the fruit buds are formed after the crop ripens is not altogether warranted. It is known now that these buds are formed much earlier in the season, and that if the foliage holds well after the fruit is gathered it is evidence that there is moisture enough present to strengthen these buds for the next season's fruiting. If the leaves have fallen, and the tree is dormant, it is then undesirable to irrigate as late as this because of the danger of starting new growth. It is only when there is danger of the tree's actually perishing by evaporation that water should be applied at this time of the year, and then only in sufficient quantities to compensate for this evaporation. This work is usually accomplished by our fall rains, and there is no reason to think that enough for your purpose will not be naturally present this year.

Possibly the Work of the Leaf Aphis.

To THE EDITOR:—I send you some Alexander apples, which never reached natural size, but stopped growing, and ripened in small, misshapen forms. The trees seem generally healthy, but the twigs bearing such specimens made little growth; parts of the leaves died, as you will see by the twig I send. On some of the leaves there seem to be remains of green aphis, which was bad this year on melons, etc., and at the beginning of the season was found on the apple trees. Were they the cause of the behavior of these apples?—GROWER, Shasta county.

It is quite possible that the attacks of the leaf aphis early in the season caused the abnormal arrested development of the twig and fruit. This is the more likely because the fruit shows a warty appearance, which often results from the punctures of the aphis. We do not find any clue to other cause of the trouble on the specimens. We have had several complaints of the work of the leaf aphis of the apple from your county this summer. Watch the trees early next summer and spray with kerosene emulsion as soon as the lice appear, though they be only in small numbers. By destroying these early ones, later injury can be obviated.

An Apple Worm, not the Codlin.

To THE EDITOR:—I send sections of apples mutilated by a small, grayish worm. One of the sections has a young worm not yet fully colored on it. I have been told it was codlin moth, but would like to know for certain; also, a remedy for it. We are not able to obtain a full-sized specimen.—J. A. STAMBAUGH, Lompoc.

The worm is not the larva of the codlin moth, although it is the offspring of a moth not very distantly related to it. The habits of the worm are, however,

very different, as it is an outside feeder and makes a cavity around the stem, and does not pierce to the center, as the codlin moth does. We have occasionally seen the work of the insect, but it has not been abundant enough to cause much injury. The remedy for it is spraying with the arsenites, just as is done for the codlin moth, and the chance of killing it is greater, because it consumes so much more of the skin of the apple, upon which the film of poison is deposited by the spray. The exact determination of the insect will be made if the specimen you sent proceeds with its transformation into moth form.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending October 7, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

The weather has been generally favorable for all late crops and for fruit drying. Light showers at the beginning of the week caused but little damage, but late grapes in some places have been considerably injured by rain. There were thunderstorms at Calistoga and other places on the 1st. Bean harvest is progressing rapidly, and the yield is reported very heavy in some sections. Hops are mostly baled and under cover; there is a large crop, excellent in quality. Sugar beets are yielding a good crop. Grain and hay are now moving rapidly, and the greater part of these heavy crops will be saved; there are daily shipments by steamer from San Luis Obispo. The correspondent at Arroyo Grande estimates that the grain crop in southeastern San Luis Obispo county and northern Santa Barbara county will be not less than one million sacks of two bushels each. New grass and volunteer grain have started up finely. There will be a heavy crop of winter pineapple muskmelons at Calistoga. Grape picking continues. Apples are yielding an excellent crop in Sonoma county.

SACRAMENTO VALLEY.

The first part of the week was cloudy, with light showers, and the latter part clear and warm. There was a severe thunderstorm and heavy rain in portions of Tehama county on the 2d. The rain has caused but little damage to crops. Plowing is progressing in some sections, and summer-fallow seeding has been quite extensive on the bottom lands. The grain, hay and hop crops are practically all gathered and under cover. Mountain apples are abundant in the vicinity of Red Bluff, and said to be the heaviest crop for five years. Oranges and olives are doing well; oranges will be of better quality than last season's, owing to the absence of severe winds.

SAN JOAQUIN VALLEY.

Monday was cloudy with light rain, which did very little damage to drying fruit, owing to timely warnings; the remainder of the week was clear with pleasant days and cool nights. The conditions have not been very favorable for raisin making, owing to the cool nights and heavy dews. Large quantities of grapes are moving to wineries. Two or three weeks of warm, clear weather will cure the greater part of the raisins now on the trays. The crop is generally good. Prunes and peaches are about all cured. An unusually large crop of hay has been harvested and is now mostly under cover. A good crop of sweet potatoes is being harvested. In some portions of the valley plowing and seeding grain are progressing, but generally the ground is too dry. Feed and water are plentiful, and stock of all kinds are in good condition.

SOUTHERN CALIFORNIA.

The weather has been generally clear and cool during the week, and favorable for fruit drying, raisin making and bean harvest. Beans were not damaged by the rains of the preceding week, and will yield a good crop. Harvesting and haying are completed. The hay crop is above average. Barley is of rather poor quality, but yielded a heavy crop. There are good crops of corn and vegetables. Walnuts are heavier than usual, indicating good quality. Apples and pears are nearly all gathered, and have yielded good crops. Citrus fruits are doing well.

EUREKA SUMMARY.—New grass is making fine growth. Grapes and tomatoes were considerably damaged by rain. Apple gathering is in progress. Some fall plowing is being done.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, October 9, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....	.08	4.29	2.65	2.34	62	52
Red Bluff.....	.08	1.93	2.05	1.13	88	50
Sacramento.....	.00	.56	.68	.66	88	48
San Francisco.....	.00	.82	1.11	.69	80	52
Fresno.....	.00	.57	.43	.48	88	48
Independence.....	.00	.77	.83	.40	78	46
San Luis Obispo.....	.00	.28	1.20	.84	82	44
Los Angeles.....	.00	.12	T	.32	84	50
San Diego.....	.00	.06	.08	.23	76	48
Yuma.....	.00	.22	.02	.79	96	56



## HORTICULTURE.

### A Succession of Peaches for Southern California.

TO THE EDITOR:—The naming of a succession of peaches would be very interesting at this time to at least one reader of the PACIFIC RURAL PRESS. I want to plant five acres, and to have a constant procession from the very earliest to the very latest, the first consideration being a good table peach—preferably of the white-fleshed, red-cheeked and juicy type—and, second, a succession during the later months of good clings for canning. W. M. BRISTOL.  
East Highlands, San Bernardino county.

The man who knows most about peaches in variety for southern California is probably Mr. J. W. Mills, foreman of the University Sub-station near Chino. Mr. Mills grew up in the peach region of Yuba and Sutter counties, and carried with him to southern California an excellent knowledge of this fruit. During the last few years he has had under close observation a large collection of varieties growing on the experiment grounds in his charge. He has made out a list of varieties ripening in season for the home orchards—judged not by commercial standards, but for time of ripening and quality as a fruit for family use—as follows:

Amsden: ripening about the last of June; regular bearer and of good flavor. Waterloo: of the same class, a few days later. Yellow St. John: fine-looking, yellow freestone. Large Early York: the best-flavored peach of its time. Cooledge's Favorite: white flesh, pale bluish, juicy and delicious. Ford's Improved: red and white flesh, fine flavor. Old Mixon's Free: similar to Cooledge's. Susquehanna: a yellow freestone of fine flavor, but not always a free bearer. Late Crawford: best yellow freestone of its season. Stump the World: large, showy, white peach. Smock's Late Free: another white peach. Lovell: the best canning freestone. Salway: the standard yellow freestone. Comet: a few days later than Salway, which is the best large yellow freestone for that region.

Of cling peaches for canning or drying, Mr. Mills places the yellow Tuscany at the head of the list. Seller's Golden Cling is also a fine canning peach, but less productive than the former. McKevitt's Cling, white flesh without red at the pit, is very satisfactory. The Lemon Cling is the best pale yellow canning variety, but with Mr. Mills it makes so much small fruit, although thoroughly thinned, that he does not consider it desirable. Of course, there are many other varieties which are available, but the foregoing would supply your need of group of varieties ripening in succession. Our peach-growing readers may be interested to make additions or substitutions to this list. We shall be glad to have them.

A LATER LIST.—Since the foregoing was prepared we notice that Mr. Mills gives in the Cultivator a revised list, which gives peaches in southern California from July 1 to November:

Jewell is a white peach with red center, rather tart, perfect freestone, ripe July 1; Amsden June, similar to Briggs' Red May and Alexander, but more prolific, ripe July 6; Jessie Kerr, white flesh, half cling, like Alexander, but has a brilliant red color on the side next to the sun, ripe July 15; Yellow St. John, perfect yellow freestone, best to date, ripe July 18; Pansy Pabor, rich yellow freestone, deep red color of skin covers nearly the whole peach, fruit above medium, tree prolific, the best flavored peach to date, ripe July 25; Miss Lolo, white freestone, tender and juicy, same type as last named, but larger and better flavored, ripe July 28; Cooledge's Favorite, same as the above, but smaller, not so prolific; Lady Ingold, yellow freestone, ripe July 30; Belle of Georgia, white flesh, freestone, red blush, very prolific and fine flavored, ripe Aug. 5; Lewkins' Honey, white freestone, very sweet, ripe Aug. 10; Elberta, large, fine red blush, flesh yellow streaked with red, ripe Aug. 20; Gresham, yellow freestone, good quality, ripe Sept. 1; Thissell's Free, white peach, good quality, ripe Sept. 10; Smock, yellow freestone, ripe Sept. 15; Lovett's Late Free, white, ripe Sept. 9; Staley's California Seedling, white flesh, blush on sunny side, subject to fungus disease more than other varieties, ripe Sept. 20; Comet and Salway, both yellow freestones, ripe Sept. 30; Baldwin's Late, white freestone, ripens in latter part of October.

### Apples at Lompoc.

The Record gives an interesting paragraph on apple growing in the Lompoc region. The most vigorous and productive orchards in that section are planted in the light soils. The trees, as a rule, attain to greater size and produce more fruit, if not of better quality. The soil must not be so light that it is inordinately leachy. The chief winter varieties adapted to the Lompoc section, and in which there is most profit, are the Bellefleur, Newtown Pippin, White and Red Winter Pearmain, Minkler, Ben Capp's Seedling, Kentucky Red Stread, Missouri Pippin, Ben Davis, Lawver and Winesap. These are all saleable varieties, but not all of equal merit as bearers. There is no profit in growing some of the best eating varieties because of shy bearing. A few

well selected sorts are better than too great a variety. There will be good money in apples when water is assured. The young orchards stand it very well until they reach the age of ten years, when they show signs of failing in both growth and bearing qualities.

## TRACK AND FARM.

### The Farmer as a Horse Producer.

In the twelfth biennial report of the Kansas State Board of Agriculture appears an article on this subject by Prof. Eugene Davenport of the University of Illinois which is a very fair presentation of the facts in connection with the raising of horses on the farms of the country and the advantages and disadvantages which surround the business. The article says the mass of horses that supply the great markets and that do the labor of the world are produced, not at great breeding establishments, where every circumstance favorable to development is provided, but upon the farms of the country, under conditions good, bad and indifferent; not by the great breeders of the world, whose lives are wrapped up in the noblest of animals, but by the general farmers, who are primarily grain raisers, and who look upon horses as a means of marketing crops and sustaining fertility; not the product of carefully-bred females and great sires judiciously mated, but of females of every type and of no type, mated often to inferior, part-bred sires, or so mismated as almost to insure inferiority of progeny. The general farmer will always remain the greatest producer of horses, not only for the reason that "white sheep eat more than black ones," but because the genius of the few really great breeders will always find its field in the production of sires and of phenomenal individuals. Many of these same breeders will class as farmers, but they are essentially horsemen, and are not the individuals to whom this paper is intended to apply. It is intended to that mass of farmers who are not horsemen, and yet who produce horses in large numbers.

HE SHOULD DO BETTER.—The general farmer should succeed better than he does as a horse producer. He would be helped, too, by better understanding of his advantages and disadvantages, leading to a procedure more in line with his limitations. If a man be not a nice horseman, with a knowledge and an eye for nice points, or if his attention be monopolized with other matters, there are two things he can never do, viz., he can never be a successful producer of sires or of their dams, and he can never be a producer of any class of horses that needs from birth that painstaking and skillful care necessary to the development of track horses of the highest class, or of saddlers and carriage horses. This will always be the exclusive business of horse genuises; and yet no other class of horses have been so extensively produced by the mass of farmers as a low grade of speed horses. Even yet, when it is hopeless for a part-bred horse to take a race at a county fair, and when every racer must not only be bred in the purple but developed with the greatest care—even yet, hundreds of farmers are breeding mares of all classes to the nearest trotting stallion in the forlorn hope of getting a record-breaker. True, it is done under the excuse of getting a "carriage horse for the boy," but I know, and so does everybody else, that there is a hidden hope that something may happen; and when the ill-gotten thing is brought out it can go just fast enough to be beaten on the track and to be dangerous on the roads. This thing has permeated the mass of farmers more than most people realize, and is responsible for infinite damage to thousands of horses that should have been produced on a different plan.

THE FARMER'S ADVANTAGES.—While the farmer who is not a horseman cannot produce, and should let fast horses alone, he has certain advantages as a horse producer that ought to be recognized, and that ought to shape his course. These advantages are:

1. A large amount of cheap feed which puts this feature of industry on much the same basis as beef production, and leads to the common statement that it costs but little more to grow a horse than to grow a steer.

2. Abundant range for proper exercise of growing animals.

3. He is himself an extensive user of horse labor.

Here is an important matter. The market calls mainly for geldings, and I take it that, broadly speaking, our farm work should be largely done by mares that are fully able to produce a foal each year. The feasibility of this plan has been abundantly shown by experience. Farm labor is not too severe or so constant as to preclude the use of breeding mares. In fact, the farm horse should be a breeding animal, to fully occupy her time and pay for her maintenance during the long periods of short work and comparative idleness. On a farm of moderate size I like, at least, one span of geldings that are always ready for any kind of work; but it is too expensive to keep a horse a year for what he can do the working season, and I have found breeding mares entirely satisfactory and far cheaper. Besides, one can afford a surplus of this kind of horse power, which is frequently almost a necessity for a limited time.

I expect to meet with the objection that it is too

much trouble to raise foals for working teams; but that matter is greatly magnified in men's minds. To be sure, many farmers owning both smooth and rough lands may be able to let the mares run idle and do the work with geldings, but it is possible only on cheap lands. Putting it from the other side, the mare that is to devote a year to giving birth to a horse that will go upon the markets to do the ordinary work of the world—that mare must do something besides all this: she must work, or the horse will cost too much, and farm work is well adapted to her conditions. The farm horse that does a year's work upon the farm and produces a foal has performed no more labor than the horse that works every day in the city or the cow that has been developed to the point of yielding two or three times as much milk as her calf would need.

Not being a horseman, this grain farmer should confine his efforts to the production of such classes of horses as require plenty of good feed and care, but little or no artificial development. He is admirably adapted to the business of raising heavy horses, though he will not care to keep 1800-pound mares for farm work. He can use 1300 to 1500-pound mares, which, if good milkers with the proper sire, will produce an excellent class of heavy horses. With the right sires, he can keep and profitably use a class of mares that will produce good delivery horses, hack and 'bus horses, and a fair grade of gentlemen's drivers. All these horses will need to be developed after leaving the farm, but can produce the raw material and ought to do it. I would emphasize the importance of good sires.

## THE DAIRY.

### How the Prize Butter Was Made.

C. F. Andrews of Point Arena, Mendocino county, won the first prize for butter at the State Fair. He gives the Produce Review an account of his methods. He began by informing the patrons of his creamery that he was going to make butter for the award, and he says they helped him. They brought 6000 pounds of good, clean milk, and they can be proud of being able to bring good milk to the creamery under the best of conditions. Mr. Andrews continues:

"The milk was separated with a De Laval separator at a temperature of 80° F., and as we have a window close by the cream vat, I allowed the cool, strong breeze that we are blessed with here to blow in as a cooler and aerator. I put a 20% home-made starter into the cream vat before commencing skimming, and, as soon as some sweet cream was separated, stirred thoroughly, and repeated same every fifteen or twenty minutes the whole day. As soon as separating was done, a small stream of water was turned on the vat, which changed the water underneath about every hour; but, as the water is never below 56° at this time of the year, I could not get the cream cooled down to more than 58° when churned; when examining the cream in the evening, I saw that it would require my attention at an early hour in the morning; so I got up about 3 o'clock, and by 4 o'clock the cream was in the churn, with the addition of 1½ ounces of butter color.

"The acid test was 46 c. c., Mann's test; butter fat, 38%, and a temperature of 58°. It took but a short time before it commenced to break, and, when just about to break, I added 10% to 15% pure water to the cream and churn until the butter was in granules.

"When all buttermilk was drawn off, I added twice as much water, and repeated same, so that the last water was clear when drawn from the churn. When drained thoroughly, the butter is leveled out in churn, and salt sprinkled as evenly as possible (5½ pounds were used per 100 pounds of butter). I worked the butter on a Mason worker twice—that is, I left it on the worker until it got firmer, and then worked it again.

"It may seem foolish to some when I say that it took me several days to make this butter—that is, I was experimenting so as to find the right amount of color that would give the shade which would be in accordance with my idea; so, also, with salt and acidity of cream. I always had the impression, when looking at anything on exhibition, that it had an extra finish, or was a special pick. Now why should not we, when exhibiting our product, try to do our very best, and exert our skill and knowledge in order to produce the best possible?"

### Home-Made Butter Worker.

TO THE EDITOR:—Allow me (in answer to the request in your last issue) to give a description of the butter worker which my father had made for use in dairy work, on a farm in the East; the wood of which it was made was oak. The table of the worker was a triangular piece of plank, about ¾-inch thick, 2 feet wide at the upper end of the table. The sides were probably 3 feet, perhaps a little more. The point of the triangle was cut off, so as to make a short side 4 or 5 inches long. The two longer sides of the table had a piece of plank 4 or 5 inches wide, fastened to



the table to stand up, forming sides, which kept the butter from working off the table while using the lever.

There were three legs; the front leg was short and was fastened to the short side of the table, formed by cutting off the point of the triangle. There was a piece of inch oak plank put under the table board at the narrow end, 2 or 3 inches from the end of the table, and the leg was fastened to this by large screws. This made the leg stand a little under the table, and made room for the pan or pail to stand on the floor, for the drippings from the butter to run into as working the butter. The two legs attached to the upper end of table were longer—I should think about 2 feet. This made the table an inclined plane. The lever was  $4\frac{1}{2}$  or 5 feet long, about  $4\frac{1}{2}$  or 5 inches wide, and  $\frac{3}{4}$  or 1 inch thick. A strong iron staple was driven in the middle of the narrow end—the lower end—of the table. The lever had a stout iron hook driven into it, and this could be removed from the worker for washing without trouble.

A. E. HALL.  
San Francisco.

## THE POULTRY YARD.

### The Poultry Crop of the Central West.

As this product is in competition with the California home product, it is important to know the character of it. The Sprague Commission Co. of Chicago has made great efforts to secure reports from the whole central-west region and sends us an outline of their results. The reports indicate a material decrease in the supply of ducks and geese, a rather liberal supply of chickens, but no larger than last year, and a smaller crop of turkeys.

**A TRYING YEAR.**—Weather conditions have been of such a variable and unseasonable character as to have had a very important effect on the production of poultry in its various stages of growth. In the first place, the cold and unusually late and wet spring worked very unfavorably against the early hatches. This was particularly the case with turkeys, many of the young birds dying from cold and wet, and their growth was greatly retarded from the same causes. Then came the excessively hot weather during July, the hottest experienced for years, with the thermometer ranging continuously for weeks from 100° to 110° at different points, and pretty much all over the country. The fertility of the eggs was affected, and many hatchings did not bring out half a brood during this period; but the later hatchings met with better success, and the early failures induced farmers to put out a larger quantity, and thus in the case of chickens, particularly, the early losses were made up. But the very hot weather and absence of rain, especially in the West and Southwest, had a decided effect on the crop of ducks and geese. Water is an important factor in the raising of the web-footed fowls, and ducks and geese suffered seriously. The creeks and ponds dried up, and in many places there was no water to be had, and, besides the losses in dead stock, a great deal of stock was shipped to market during the summer and much earlier than usual, and these facts create the belief that the coming supply for winter will be smaller than for several years.

As a result of the drouth, the corn crop is not much over half of that of last year, and this induced farmers to sell off a considerable portion of their stock earlier than usual.

**TURKEYS.**—The crop of turkeys, it is estimated, will be fully 15% short of last year, or about 85% of a full crop. Last year was considered about a full crop. The crop is about the same as during the year 1899, possibly a little larger. Our reports in nearly all instances claim the turkeys are much poorer than usual this year, and the scarcity of feed, it is argued, will bring in a large quantity of turkeys around Thanksgiving of a poorer quality than last year. Christmas turkeys are likely to bring good prices.

**CHICKENS.**—The majority of our reports indicate an increased crop, some of the correspondents in their sections giving as much as 25% increase, while a fair proportion gives less than last year. It probably would be fair to place the crop this year at about 95% as compared with last year. The early hatchings were smaller than in former years, but the later settings made up for a good share of the shortage, and, while we estimate the crop a little short of last year, it may develop that the crop may by late hatchings be larger than last year. Old chickens have been marketed rather freely, and may have been sold off more closely than in former years on account of the drouth scare.

**DUCKS.**—Everything points to a smaller crop of ducks, if our correspondents can be relied upon. From the estimates it would be fair to place the crop fully 10% short of last year. Last year the crop was fully 20% less than the year 1898; but as the crop that year was way above an average crop, we feel justified in saying that the production this year will not be much below an average crop. Prices realized

have not been giving much encouragement to farmers to raise ducks. They seem to have been marketed freely on account of the anticipated scarcity of feed and the short water supply.

**GEESE.**—Another shrinkage in the crop is indicated by this year's reports of about 10% to 15% as compared with last year, making a showing of about 70%, against 80% last year, or some 30% less than the crop of 1898, which was considered a full crop.

## THE IRRIGATOR.

### Irrigation in California.

The United States Department of Agriculture will soon issue a comprehensive report (Bulletin 100, office of Experiment Stations) on irrigation in California, which embodies the first attempt at co-operation by the Federal Government with any individual State in the solution of intricate legal and economic problems underlying irrigated agriculture.

**SCOPE OF THE REPORT.**—The investigations chronicled by the report, and upon which the conclusions and recommendations of the engineers in charge are based, were made in co-operation with the California Water and Forest Association during the summer of 1900, under the direction of Elwood Mead, expert in charge of the irrigation investigations of the Department of Agriculture, assisted by eight specialists in irrigation engineering and irrigation economics. In addition to a general review of the agricultural situation in California by the expert in charge, the report covers the local conditions of irrigation and water rights on nine typical streams, and brings to light astonishing facts about California irrigation, the nature and extent of which have never been appreciated by the people of the State. It shows that in many of the principal portions of the State agricultural development is greatly hindered because through the inadequacy of California laws the waters which could and should make of them highly developed and valuable agricultural districts are flowing unused to the sea.

**DIFFICULTIES FOUND.**—The report holds the chief obstacles to agricultural development in California to be an unremitting production of cereal crops in the great interior valley and a lack of more diversified farming; opposition to irrigation in districts which the census shows to be measurably decreasing in wealth and population; a too great zeal on the part of advocates of the Wright district law, followed by unwise investments which have led to loss and disappointment and a consequent opposition to irrigation laws of whatever nature; over appropriation of streams, resulting in confusing uncertainty as to the number and extent of valid appropriations; the conflicting nature of the water laws and the existence, side by side, of two opposing doctrines of appropriation and riparian rights; absolute private ownership of water in face of the fact that all leading countries where irrigation is necessary recognize only the rights of use and attach them not to the owner of land or to canal companies, but to the land itself, from which they are inseparable; and, finally—and most important of all—the absence of any State control of streams or any State administration of rights to their use.

**NEEDFUL THINGS.**—The conclusion of the special agents and experts who made the investigations are that the State should ascertain the volume of available irrigation water, define all rights to its use, whether already acquired or to be acquired hereafter, and provide an efficient system of water administration. The definite recommendations for attaining these ends are far-reaching, embodying, among other measures, the creation of a State board of control of waters, similar to that in existence in Wyoming for the past ten years, the making of unappropriated waters State property, the limitation of all appropriations to actual beneficial use, and the attachment of all rights to water to the land irrigated. If carried out, they believe, these recommendations would put an end to the conflicts and controversies which now harass irrigators in California, and would place its irrigation law and development on a sound and permanent basis.

The special agents who carried on the investigations under the direction of Expert Mead and the streams to which they were assigned were as follows: W. E. Smythe, Susan river; Marsden Manson, Yuba river; J. M. Wilson, agent and expert in irrigation investigations, Cache creek; Prof. Frank Soule of the University of California, San Joaquin river; Prof. Charles D. Marx of Stanford University, Salinas river; C. E. Grunsky, city engineer of San Francisco, Kings river; Edward M. Boggs, Los Angeles river; James D. Schuyler, Sweetwater river.

The general agricultural review of California by Elwood Mead, the expert in charge, which opens the report, is also a summary of the work of the others. One of the most striking portions of this review deals with the value of irrigation water and the effect of irrigation on California land values. Land in southern California, which without water for irrigation was not worth \$5 an acre, is shown to have sold,

when irrigated and planted to orange trees, for \$1700 an acre, and instances are given where a water right of fifty miners' inches recently sold for \$50,000, and where \$3.50 an inch was paid last year for a twenty-four hours' flow.

**GREAT OPPORTUNITIES.**—Speaking of the great interior valley of California, Mr. Mead declares that the water supply available there for irrigation without injury to navigation ought to make it the Egypt of the Western Hemisphere. "Within a radius of five miles," he says, "I saw every product of the temperate and semi-tropical zones which I could call to mind," and, continuing, he observes that there are more acres of irrigable land in the San Joaquin valley than are now watered in Egypt from the Nile, where agriculture alone supports over 5,000,000 people. The irrigated lands along the Nile, he says, support 543 persons to the square mile, while on a 35-mile drive in the Sacramento valley, over what is potentially one of the most fertile and productive agricultural districts on this continent, he saw only two schoolhouses, attending which were only fifteen children. Just before taking this ride he had been for a distance of 15 miles through an irrigated district of Utah, where there was not a farm of over thirty acres. The average population of the Utah district is over 300 to the square mile, that of the California district ten. "Every natural advantage is with California," he continues, "but the Utah district is irrigated, the other is not."

**NEED OF PROPER LAWS.**—The laxity of the California irrigation laws could not be shown more forcibly than by the working of the law of appropriation, by which water may be diverted from its natural channel and used for irrigation on lands away from the streams. This is fully covered in the report. The law places absolutely no limit upon the amount of water that any individual may claim, and as a result more water is claimed from the nine streams studied than could be found in all the streams of the entire arid West. In Honey Lake basin, where the ordinary spring flow of the streams is only about 10,000 inches, the enormous amount of 28,000,000 inches is claimed, which, on the present duty of water in this region, is enough to irrigate over 200,000,000 acres of land. On Cache creek, where the summer flow is under 10,000 inches, in addition to one claim of over 4,000,000,000 cubic feet and others aggregating 2,000,000 unintelligible units, over 7,000,000 inches are claimed. The filings on San Joaquin river amount to over eight times its greatest flood flow, and those on the Sweetwater river call for 5000 times the existing supply. Yet, with all this multiplicity of claims, the law provides no way for their adjudication other than appeals to ordinary courts of law, which the history of California irrigation as set forth in these reports shows ends only too often in even greater complication and uncertainty than existed before the courts were appealed to. "The whole system is wrong," declares the report. "It is wrong in principle as well as faulty in procedure. It assumes that the establishment of titles to the snows on the mountains and the rains falling on the public lands and the waters collected in lakes and rivers, on the use of which the development of the State must in a great measure depend, is a private matter. It ignores public interests in a resource upon which the enduring prosperity of communities must rest. It is like A suing B for control of property which belongs to C."

No law or institution has given so much trouble to California irrigators as the English common law doctrine of riparian rights, which was adopted by the first Legislature of the State. In spite of having been supposedly abrogated by a later Legislature; it has complicated almost every attempt to settle water titles in the State, because it is diametrically opposed to the California law of appropriation and wholly irreconcilable with the use of water in irrigation.

In closing the review of the situation the expert in charge declares that "the reform of the irrigation laws of California involves the future of a great commonwealth. The possibilities which wait on success and the evils which will surely attend failure ought to enlist the efforts and intellects of the ablest and best men in the State. It is an opportunity for the exercise of constructive statesmanship which rarely appears in the life of any commonwealth. The task is not to piece together the discordant fragments of laws and decisions which now control, but to create an irrigation code worthy of an enlightened and self-governing people. Success will mark the beginning of an economic revolution whose influence will be felt throughout the West. If the creation of institutions worthy of the time and place can come as a part of the world-wide movement of trade and population toward the Pacific coast, and of material development of arid America by public and private aid, which is now being so strenuously urged, the opening years of the twentieth century will witness a new era of home making in the West."

The report will contain between 400 and 500 pages, with thirty full-page plates of maps and halftone illustrations, and also a large number of text figures. Under the law only 1000 copies of this report will be printed by the Department, and there can, therefore, be no general distribution unless Congress should order a reprint.



## THE HOME CIRCLE.

## Interfused.

We must buy and sell in the markets; we must earn our daily bread; But just in the doing these usual acts may the soul be helped and fed. It is not in keeping the day's work and the day's prayer separate so, But by mixing the prayer with the labor, that the soul is taught to grow.

For if sweeping a room by God's law is a service He deigns to bless, And mending a kettle worthily is working for Him no less Than steering steady the ship of State, or wielding the sword in war, Or lifting the soul of man by songs to the heights where the angels are—

Then none may deem it wasted time who stands in a humble spot And digs and waters a little space which the hurrying world heeds not; For the Lord of the harvest equally sends His blessed sun and rain On the large work and the little work, and none of it is in vain.

—Susan Coolidge.

## Mrs. Norton's Visitor.

It was a sultry August afternoon. Devonshire lanes are long and steep, and the stout, elderly gentleman who was climbing up the hilly road which led past Mrs. Norton's cottage stopped more than once to pant and wipe his heated brow with his silk handkerchief.

"Deary me, sir, but you do look warm," cried the kindly mistress of the cottage, who was seated at work on her shady porch; "would you like to step in here a bit and take a rest?"

"Indeed, I would, ma'am," replied the pedestrian heartily; these roads take it out of one when one isn't in one's first youth. And I've been trying a short cut, like an old fool, and so added a couple of miles to my walk, I do believe."

Mrs. Norton bustled back to her old-fashioned kitchen, and following the approved code of rustic politeness, ostentatiously dusted a perfectly clean chair before offering it to her guest, who sank into it with a sigh of satisfaction.

"Phew," he said, "this is comfort; I'm much obliged to you, ma'am, for your kindness."

"I was just a-going to make tea, sir," cried Mrs. Norton; "maybe you'd take a cup, too," and the old gentleman really assented, and soon sat sipping the beverage and chatting to his hostess. He was making a little holiday tour in the west of England, he said, and preferred rambling about on foot when he could. "But I'm beginning to find out that I don't, at sixty, walk as well as I did at twenty," he concluded, "and the roads hereabouts nearly beat me."

"They are a bit steep and rough," conceded Mrs. Norton, "though, having lived here all my life, so to speak, I don't heed them much."

"You've a charming old cottage here," said her visitor, glancing around at the quaint oak dresser, the clean red-tiled floor, and cozy chimney corner, "and you keep it as neat as a new pin."

Mrs. Norton stifled a little sigh.

"I love the old place well enough," she said; "twas my husband's father's before him, and he brought me home here when we was wed, and all our little ones was born here. Folks sometimes say they wonder how I abide here now I'm all alone and think I'd be better off in the village nearer neighbors; but I like the old home best."

"And I don't wonder that you do," said her guest heartily, "and—why—what's that on the dresser yonder?"

Mrs. Norton rose and handed the indicated objects—a couple of rather singular looking little vases—to her visitor.

"They're just ornaments—useless things enough," she said, rather apologetically, "but I bought 'em of poor Betsy Binder last winter, when her mother died, and the girl had to go out to service in London. I doubt they're much good; but Betsy she was wanting to make up some money to buy her

clothes, and it seemed only neighborly to help her a bit. So I gave her half a crown for the jars. They'd belonged to her mother who'd been a servant in a big house once, and had many odds and ends that had been given her by ladies; but I'd never have laid out good money on such rubbish except to help poor Betsy," added Mrs. Norton, with the instincts of a thrifty West County housekeeper asserting themselves.

The old gentleman did not answer. He was thoughtfully turning round the vase which he held.

"I don't know—I'm sure I can't say," he muttered to himself, "they do look peculiar—but I'm not enough of a judge to be certain. Do you want to part with those vases?" he asked abruptly.

"They ain't no good whatsoever to me," answered Mrs. Norton.

"Well, I tell you what, ma'am, I'll pay you what you paid for them, that's two and sixpence, or say three shillings, for I've had some tea."

"I don't sell my tea, sir," said Mrs. Norton, bridling up a little; "you're kindly welcome to that, I'm sure."

"No offense, no offense meant," said the visitor; "but there, I haven't change, so say three shillings for the vases alone—you should always sell again at a profit, you know," and carefully wrapping up the vases in his handkerchief, the old gentleman deposited them in one of his ample pockets, and took his leave.

"Well, I did think it was just sheer waste of money when I bought them ugly little jugs," remarked Mrs. Norton to herself, "and I don't see what the old gentleman can want with 'em, either; but there, I dare say he's better able to waste money than I am, and folks from London do buy all manner of queer rubbish, sometimes;" and the good woman resumed her needlework on the porch.

Six months afterwards another old gentleman, taller and thinner than the one who had climbed up the road by Mrs. Norton's cottage, was walking round the showroom of a well-known dealer in china and bric-a-brac. No one would have guessed from his shabby attire that this old man was one of the richest and most eager of "collectors" of art treasures, and ready to pay any price to gratify his taste.

"I've now nearly completed my collection of potteryware," he remarked, as he wandered around, glancing at the various objects which the dealer was obsequiously displaying before him, "but there are still a few blanks left in it—some ordinary descriptions of certain kinds of potteryware which were common enough a century or so ago, but have now become very rare, indeed, I am almost afraid have vanished altogether, for I've never seen—why"—and the collector made a sudden pause before the two little vases which had once figured on Mrs. Norton's dresser in Devonshire. "The very specimens I have been seeking for years," cried the collector, as he handled the vases with fingers that trembled from excitement. "I must have them, I must have them, Smith. What is their price?"

"I don't know that their owner wants to sell them at all," replied the dealer; "they were brought here a couple of days ago by an old customer of ours, a Mr. Page, who said he'd picked them up in a Devonshire cottage, thinking they looked quaint, and he wanted to know if we could give him any idea of their value; they weren't in his line of collecting, you see. Jones, who understands china and pottery, and values for that branch of our business, is laid up just now; so Mr. Page left the vases for him to see when he was able to come up to the shop. I don't know that they are for sale."

"They must be for sale," answered the collector firmly; "Smith, I intend to buy them."

"Well, here comes Mr. Page, so you can speak to him about them yourself," said the dealer, willing to oblige two good customers. And the collector, still clutching one of the coveted vases, advanced to negotiate for their purchase.

The six months which had passed

since Mrs. Norton entertained her chance visitor had not proved very prosperous or happy ones to that good woman. A terrible calamity had lately befallen her in the death of her only son, a sailor, whose ship "had foundered with all hands on board." A few months previous to this son's decease he had lost his young wife, and Mrs. Norton had gladly received into her cottage her orphan grandchild, a girl eight years old, who, owing to a spinal complaint (the result of a fall in childhood) was unable to sit up or walk. Little Bella was a sweet-natured and patient child, cheerful always, in spite of the pain which she often suffered; and "the little maid was fine company," as Mrs. Norton used to say. Bill, who had always helped his mother, like the good, dutiful son that he was, sent home the best part of his earnings to "mother and the little 'un, bless their hearts." But now poor Billy's money would come no more; and Mrs. Norton with a helpless grandchild to "fend" for. Her only other surviving child, a daughter, had married a man, who, although not actually idle, and certainly not vicious, was an emphatically unlucky individual, and never seemed able to make his own way in the world. A little while back an energetic brother of this Philip Dawson, who had emigrated, wrote to beg his brother and family to join him in Canada, promising to find certain employment for both Philip and his wife on a farm there. The Dawsons were willing enough to go, but how were the passages, money and outfits for a man, his wife, and four children to be provided for? Had Bill lived he would doubtless, with true sailor liberality, have helped to find the money; but poor Bill was now sleeping beneath the billows of the Pacific. This passage and outfit question pressed most of all upon Mrs. Norton's mind. Given "time to turn round," as she phrased it, she believed she could have managed to do without her son's help in keeping her little home together; for some kind ladies in the neighborhood were thinking of arranging to "board out" invalid children, and Mrs. Norton's house had been suggested as an ideal one for this purpose. But the very interest shown in her by these friends (who were desirous to do at once a double kindness and to benefit both Mrs. Norton and their invalid proteges) sealed that good woman's lips regarding her worst trouble—the necessity of seeing this excellent opening for her son-in-law and his family lost through lack of means to send them to Canada.

Unless the party could start in another fortnight the promised situation abroad would be filled up, so George Dawson had written; it was only at his earnest request that the "opening" has been kept thus long waiting for his brother.

"And one way and another, I'm sure it 'ud run to forty or fifty pounds to send 'em all off comfortable," thought Mrs. Norton despairingly, "and where's that ever to come from I'd like to know? Not but what Phil 'ud be the man to pay it back if once he got into good work in Canada; and George is here to help 'em on; but to raise the money now—I can't speak to the ladies about it, and, indeed, I believe they've laid out all they can already. None of 'em's rich, so to speak, and as the vicar's wife said to me yesterday, they're obliged to wait now to see what money they can get in, before they can settle how many children I'm to take."

"Ah, if your dear daddy was only here, Bella, he'd have helped, I know," said Mrs. Norton one day to the little girl, to whom she was about to confide many of her cares and anxieties. Bella, like many another invalid child, being "old for her years."

"Will not God help us, Granny?" asked Bella, confidently; but Mrs. Norton only sighed in reply, feeling rebuked by the child's simple faith, to which she herself had not risen. She wrapped Bella's shawl about her on the couch, kissed the child tenderly, bade her take a little sleep before her tea, and walked to the door with a heavy heart.

"Now, I daresay you never thought to see me again," cried a cheerful voice, and the same old gentleman who had been Mrs. Norton's guest six months ago stood at the threshold; 'tisn't so hot to-day as it was the last time we met, ma'am."

"Will you please come in, sir?" said Mrs. Norton, a little dully; her own anxieties were pressing too heavily upon her to respond with the old, cheerful alacrity.

"Come in, of course I will. I've travelled all the way from London on purpose to do so," said the old gentleman, entering briskly and seating himself in the big arm chair. "Now, look here, ma'am, you remember six months ago, selling me some little vases—I gave you three shillings for them, you recollect?"

"Yes, I'd bought 'em of Betsy Binder," answered Mrs. Norton, wondering what was coming next. The old gentleman leaned forward and wagged his fat forefinger impressively, "You sold 'em for three shillings,"

he said, "and I sold 'em again, and what do you think I got for 'em?—why, just £100—now think of that! I don't think they were worth quite as much as that, mind, but a fellow who collects pottery had set his mind on them, and bid up till I gave them to him; they're curios, doubtless, and worth something in the right quarter—hey, what's this—why the woman's crying!"

Indeed, poor Mrs. Norton had fairly broken down into convulsive sobs.

"Oh, if I'd only known," she cried, with bitter regret to think of how she had thus thrown her fortune away as it were.

"Now, I daresay," went on the old man "that you're calling me in your heart the most greedy old curmudgeon that ever lived; but see here. When I bought those vases I knew as little about their actual value as you did, but I thought they were worth showing and asking about. And I made up my mind then that if they turned out a good thing we'd halve their price fairly, you and I, and I've come down here to-day to give you £50 out of that £100. But I met the vicar on my way and he walked up part of the road with me, and we had a chat, and he told me about the little girl yonder, poor little lass—I'd a little one like her myself once—so there, you shall keep another £25 for her; £75 altogether. I don't think, ma'am, I've made a bad bargain for you, after all."

But Mrs. Norton could not reply.

"Well, I'm in a hurry," said her visitor, rising. "I'll leave you this check; it's filled up for £70, see, and if you take it to the bank at — (naming the nearest town) to-morrow, they'll tell you what to do about the money; it's not safe to be keeping a sum like that in your cottage. But, just to show you that it's all real," and the old man pressed a slip of paper and five golden sovereigns into Mrs. Norton's trembling hands, and had trotted down the road before she had even found breath to thank him.

"Granny," said little Bella, suddenly waking, "who are you talking to, and why are you crying? Oh, granny, where did all that money in your lap come from? Did God send it?"

"Yes, darling," said Mrs. Norton, reverently, amid her joyful tears now, "I think he did! We will thank Him for it together, my little maid."—Sunday Magazine.

## Blowing the Feather.

A simple and successful game is the old-fashioned one called "Blowing the Feather." Having provided a sheet or tablecloth and a small feather such as sofa pillows are stuffed with, ask your guests (all but one) to be seated on the floor in a hollow square. The tablecloth or sheet is then spread so that the players can hold the edges of the sides and ends up just under their chins, thus stretching the cloth taut about a foot and a half above the floor. Upon the cloth the small feather is placed, and the player who is left out of the square is then told that he must do his best to catch it either in front of or



upon some one of the seated players, who will then be obliged to take his place. At a signal the players, on the floor begin to blow, and the feather flies hither and thither, too, until he catches it at last on some unwary individual or some one too weak from laughing to blow quickly and effectively.

#### Joke Was on the Judge.

Judge William Yost, of Greenville, Ky., who is candidate for the Kentucky Court of Appeals, is one of the biggest men in the State, physically, at least, for he stand 6 feet 5 inches in his stockings, and has a pair of shoulders like those of a professional prize-fighter. The judge is a great joker, and when in the city recently a bootblack called out "Shine, sir!" the judge looked at him vacantly, pretending to be deaf and dumb. After several minutes of sign language he understood. He leaned against a building and the boy went to work. Another bootblack appeared, and the one at work said:

"Youse needn't stop; dis is all mine."

"Sh-h! He'll hear yer," whispered the other.

"I'm gettin' five a shoe for dese scows," was the other's reply in a loud voice. The second boy looked so astonished at his friend's boldness that the latter laughed and said:

"Say, yer chump, he's deaf and dumb. See?"

The other boy, who had been looking with all his eyes at the giant, blurted out in a loud tone of admiration: "Say, he's a big, ugly lookin' divil, ain't he?"

This was too much for the judge, and he broke into a laugh. The boys looked for an instant at him, and then fled down the street, leaving the judge with but one shoe polished to look for another bootblack to make equally presentable the other "scow."

#### Tots at Play.

Wordsworth's lines of a child at play, "as if his whole vocation were endless imitation," were recently recalled by a conversation overheard in the children's ward at a provincial hospital.

A little girl, whose role was that of nurse, rang an imaginary telephone on the wall to talk to her companion at the farther end of the room, who played the part of doctor.

"Hello?" said the nurse, "is that the doctor?"

"Yes," answered her companion in a deep voice; "this is the doctor."

"This lady is very ill," he was informed.

"Well, what seems to be the matter?"

"She has swallowed a whole bottle of ink," said the nurse.

The doctor, not flurried, inquired what had been done for the patient; but the nurse, too, was ready in emergencies.

She answered: "I gave her two pads of blotting paper!"

#### Moral Bravery.

Many a brave soldier who has stood unflinchingly at the cannon's mouth has not had the moral courage to stand firm in the cause of right when laughed at by his mates.

We are told that when Coley Patterson was a boy at Eton, and captain of the cricket eleven, he was present one evening at a 'cricketing supper,' and one of the boys told a nasty, low story. Coley stood up before all his school fellows and said, "If any more such stories are told in my presence, I resign my captaincy and leave this school."

His words took effect, and thus by the influence of one boy the tone of the great public school was purified and raised. The brave schoolboy became a brave martyr bishop, and laid down his life on an island in the far Pacific.

"WHAT would you do if you had a million dollars?" said one plain, everyday man. "Oh," replied the other, "I suppose I'd put in most of my time comparing myself with some one who had a billion and feeling discontented."

## DOMESTIC ECONOMY.

### Domestic Hints.

**SCRAMBLED EGGS.**—Take one-half dozen fresh eggs, break them open in a bowl without stirring; have an agate saucepan ready, put in two heaping tablespoonfuls of butter; melt over a moderate fire, add one scant pint of milk, a generous one-quarter cupful of shaved soft cheese; heat together over the fire, then add the eggs, stirring constantly with a silver fork, until the eggs thicken and separate from the milk. Season at serving, not before; serve immediately on a hot dish. This also makes a tasty border for frizzled beef.

**BOSTON BROWN BREAD.**—Mix half a pint of rye meal, not sifted, with one pint of sifted cornmeal, a pint of sour milk, half a gill of molasses, a teaspoonful of salt and one of soda, dissolved in a little boiling water, and stirred in at the last. Butter a covered tin pail well, pour in the dough and let it boil at least three hours and a half. The water must be kept boiling around but not over the pail. Before serving take off the cover of the pail and set the tin in the oven for at least half an hour. A cupful of seeded raisins, cut in two, makes a very good addition.

**RASPBERRY CHARLOTTE.**—Take two pounds of ripe raspberries, remove the hulls, see that there are no insects in the hollows of the berries, and have in readiness, also, one pound of dry crumbs. Then butter a pudding dish and cover the bottom with a layer of dry crumbs; on the top of this place a layer of raspberries, sprinkle plenty of sugar over them, add another layer of breadcrumbs, then a layer of raspberries sprinkled with sugar, and so on until the dish is filled; let the last layer be breadcrumbs. On top of this last layer put bits of butter. Place a plate or cover over it and bake for about thirty minutes. Remove the plate or cover a few minutes before serving and let it brown. Serve cream with it.

### Hints to Housekeepers.

If a cup of sour cream is found in the ice-box some of these warm mornings try using it for a dressing for the dinner salad of lettuce; beat it up with a whisk, sprinkling in about a tablespoonful of sugar, and toward the end of the beating add a very little lemon juice, not more than a tablespoonful.

Green peas mashed very soft are excellent to give color and consistency to a fish dressing. The juice of spinach or other salad herbs will give a delicate shade of green to a mayonnaise. The pounded coral of the lobster mixed smooth with oil and added to a mayon-

naise will give a good red color to a fish dressing, and cooked beet juice or deeply colored fruit juices will color an ordinary mayonnaise.

Sour cream makes an excellent dressing, and the most fastidious objector to cream would never recognize it if not let into the secret. The cream must not be too old. The juice of half a lemon, two teaspoonfuls of vinegar, a good pinch of cayenne pepper, a teaspoonful of sugar are added to a cupful of thick, sour cream and beaten together thoroughly. It is an excellent dressing for tomatoes and cold vegetables, and can be used with celery and apple salad.

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## LAND AND HOME GAZETTE.

### Napa County, One of the Most Inviting in the State to Immigrants.

In line with the practical side of the newly added department, "Land and Home Gazette," is here given a brief illustrated description of Napa county. Everything about this county goes to invite home seekers, those looking for general business opportunities and for locations for manufacturing establishments, those wishing to buy land "on speculation" or to invest money in any of the usual ways, those seeking a salubrious, health-giving climate and grand and beautiful scenic sur-

roundings, to take a look at Napa county. The nearness of this county to San Francisco makes the trip by boat or rail a short and pleasant excursion, and the visitor may be sure of the most cordial reception and treatment. He will find here, as has been well said, "a goodly land; a land flowing with milk and honey; a land of corn and wine; a land where he can sit under his own vine and fig tree, and orange and lemon tree." And he will find an intelligent, hearty, healthy, good-looking people ready to give him a



NAPA COUNTY ORANGES.



SOME NAPA COUNTY FRUITS AND VEGETABLES.



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genuine Far West and Golden State welcome combined.

The attractions and resources of the county may be assumed when we recall that only a few short years ago the territory of which it is comprised was Indian territory, occupied and roamed over by the red natives, while to-day it is occupied by people belonging to the highest civilized nationalities of the world and dotted over with towns and cities, with fine mansions on highly cultivated farms, and with school houses and churches and manufactories. The Indian population was a numerous one, made so by the ease with which a living could be obtained from the rich lands and the abundance of fish in the streams and wild game on the hills and in the valleys. The natives and wild

animals are gone, except a solitary individual here and there; but the rich valleys and hills and the streams with their fish are still there and the land will in time be again populated even more densely than it was by the natives by a happy, thrifty people enjoying all the comforts and luxuries of the most favored land and the highest civilization.

The county is somewhat larger than the State of Rhode Island; and with an infinitely superior climate, there are all the other conditions and resources to support a population to the square mile equal or even greater than that State, or Belgium, the latter standing the highest in the European statistics of population.

The county may be set down as in the latitude and longitude of San Francisco:

north 37° 8' 26", w is bounded on the spurs of the Coast mountains, on the north on the south by San Pablo bay, and San Francisco.

The topography is briefly as hill and leys being the Napa Napa being about and 6 in width. irregular in shape fertile and pleasant of about 50,000 acres.

Without taking can be raised in said, and with extra thing in the line of fruits, berries and



CENTRAL FRUIT DRYING YARD NEAR NAPA CITY.



CHERRY PACKING IN A NAPA COUNTY ORCHARD.





ENGLISH WALNUT ORCHARD IN NAPA COUNTY, CAL.

everything that grows in the temperate and semi-tropical zones can be raised here prolifically and of the finest quality.

The box of mixed vegetables and fruit shown are fair specimens of what can be produced. The box measures 2 feet in length, and shows that the row of tomatoes on the outside at the bottom measures nearly 2½ feet.

The box of oranges was picked partly from the yard back of the Goodman Bank and partly from a tree on the lawn at the residence of S. M. Chapman, president of the Bank of Napa, but late in the season, after the first had been gathered. The Rev. Richard Wylie, pastor of the Napa Presbyterian Church, who has had his home here for thirty-five years, and has been one of the county's most observant citizens,

having a score of bearing trees in his garden, said in a recently published article that, with judicious care and attention to those things which are essential to the successful culture of these fruits anywhere, citrus fruits may be produced that will rank with the best grown in the State. From the small but delicious Satsuma to the large and popular Navel the orange is a possibility with the soil, climate and locality—and so with the lemon.

Columns might be filled with instances of surprisingly large vegetables, fruits and berries. On the Suscol ranch, south of Napa, the finest peaches were gathered from trees sixteen months after planting, and apples from trees two and a half years after planting. In the small fruit (berry) class the production of blackberries per acre is enormous, and it is common to find the sweet-tasting strawberries in the markets measuring 6 inches round. It seems incredible that with the long, rainless summers such results can be had and rich, luscious fruits and berries be grown to perfection with absolutely no irrigation.

The acreage of olives is increasing rapidly. There is no question but that this county equals, if it does not excel, any other locality for the production of this valuable fruit, and the output will be a mine of wealth to Napa county.

In the growing of the grape and making of wine it is conceded that Napa takes first rank.

Conditions could hardly be more favorable for the location of factories. Pleasant and cheap homes for the operatives can be had and transportation is convenient and at fair rates by boat and railroad. Already there are at Napa three tanneries of shoe, harness and glove leather, and a shoe factory, a woolen mill, planing mill, machine works, flour mill, canneries, fruit dryers, wineries, distilleries, and cream of tartar works.

Like reasons make the county a good one for all lines of commercial business. At Napa there are three banks: Bank of Napa, Goodman Bank and Commercial Bank.

In an educational way the county ranks with the highest in the State—the State standing in the front rank in the nation. All the religious denominations, it is thought, have congregations in the county, some of them having very fine edifices, the Presbyterian at Napa costing, with its grand pipe organ, about \$40,000. The Methodists at Napa also have a fine building, with a pipe organ, and a beautiful cottage parsonage beside the church. In morals the county stands high and the percentage in criminality is low.

For climatic and scenic reasons two great State institutions have been located in the county: a State Hospital near Napa and a Veteran's Home at Yountville.

First in importance in towns is Napa, the county seat, at the head of navigation on the Napa river, and on the railroad. It is a beautiful city and, like the county, is well governed and carries no debt and levies a low rate of taxation. The population of the city is 5000 and of the county about 20,000. The city's water is furnished by the Napa City Water Company and it is ample for all purposes and of the best quality and very soft and pure. The light for the city and its citizens is furnished by the Napa Gas & Electric Light Company, the electricity being obtained from the Bay Counties Power Company.

The next in importance is the city of St. Helena, about 20 miles north of Napa, with its 2000 population. It also is a well governed city, with low taxation and first-class schools, churches, fraternal halls, fine streets, water and gas works, banks, newspapers, etc. It is in the center of a rich agricultural, horticultural and viticultural district. In the interest of this last named industry the W. A. Mackinder Company publishes the Viticulturist at St. Helena, which handles its specialty in a very intelligent and reliable way.

Nine miles north of St. Helena, at the terminus of the railroad and at the foot of Mount St. Helena, is Calistoga, also an incorporated city, like the others, of 1200. Here Nature has presented to

man the opportunity to make one of the most delightful and effective health-giving resorts in the world. Here are hot springs teeming with life-giving properties, and here are earth solutions furnishing what are called "mud baths," the springs and baths together, it is said, driving out and curing about all the ills that flesh is heir to. The spot could hardly be more romantic, with its secluded nooks and deep canyons and its grand view from Mount St. Helena. This little city has good schools, churches and a newspaper.

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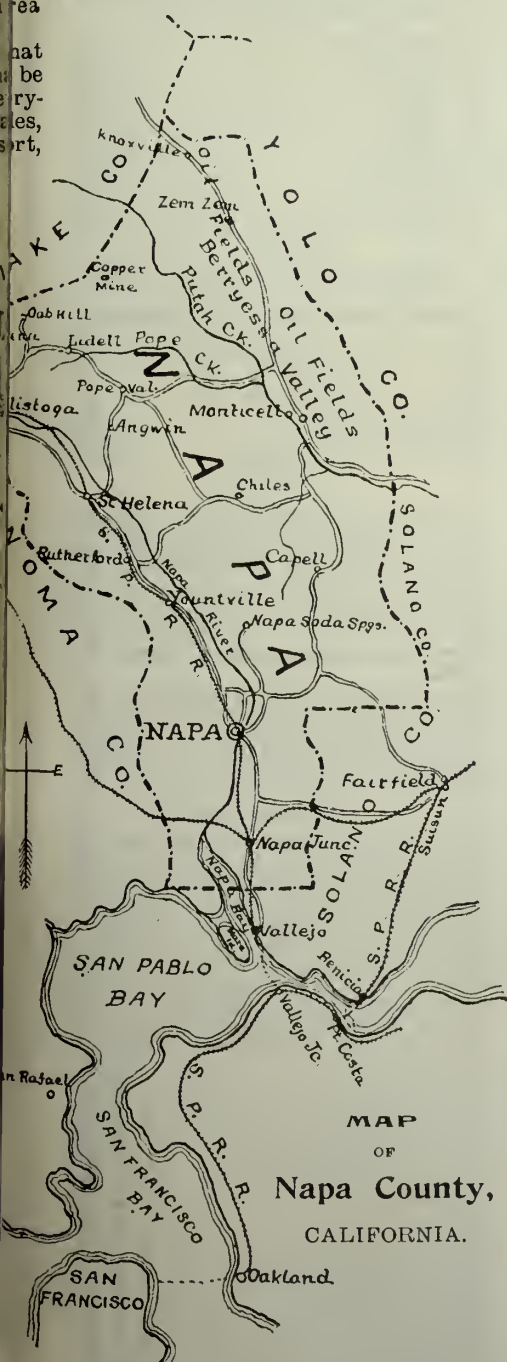
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# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Oct. 9, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	68 1/4 @ 69 1/4	72 @ 72 1/4
Thursday.....	68 1/4 @ 68 1/2	72 1/2 @ 72 1/2
Friday.....	68 1/4 @ 68 1/2	72 1/2 @ 72 1/2
Saturday.....	68 1/4 @ 69 1/4	72 1/2 @ 72 1/2
Monday.....	68 1/4 @ 69 1/4	72 1/2 @ 73 1/4
Tuesday.....	69 1/4 @ 70 1/4	72 3/4 @ 73 3/4

### CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	34 1/4 @ 35 1/4	36 1/4 @ 37 1/4
Thursday.....	35 1/4 @ 35 1/4	37 1/4 @ 37 1/4
Friday.....	35 1/4 @ 35 1/4	37 1/4 @ 37 1/4
Saturday.....	35 1/4 @ 35 1/4	37 1/4 @ 37 1/4
Monday.....	35 1/4 @ 35 1/4	37 1/4 @ 37 1/4
Tuesday.....	35 1/4 @ 35 1/4	37 1/4 @ 37 1/4

### SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	98 1/4 @ 98	1 02 @ 1 02 1/4
Friday.....	98 1/4 @ 97 1/2	1 02 1/4 @ 1 02 1/4
Saturday.....	98 1/4 @ 98 1/4	1 02 1/4 @ 1 02 1/4
Monday.....	98 1/4 @ 98 1/4	1 03 1/4 @ —
Tuesday.....	98 1/4 @ 99	1 03 1/4 @ 1 04
Wednesday.....	98 1/4 @ 98 1/2	1 03 1/4 @ —

### WHEAT.

The wheat market has been slow and in a generally unsatisfactory condition for the selling interest most of the time since last review. The announcement last week of the strike being ended was received with a general sigh of relief and satisfaction, especially as all parties interested were reported pleased at the outcome. In other words, it was made to appear as though both sides had come out victorious in the big and prolonged fight. A happy way to have all rows end. It would be nearer the truth, however, to say that both sides lost. But the strike was not off, so far as the stevedores at Port Costa were concerned, and this is the part of the labor disturbance which has been most seriously and directly affecting the local wheat market. Ships are being loaded, but not as rapidly as desired, the organized stevedores and the combined exporters being both inclined to be equally exacting and unyielding in their demands. If only the shippers and stevedores were affected by the trouble, it might not be so bad to let the contest continue at their pleasure, but with the agricultural interests of the State suffering in consequence, there should be some law for speedily straightening out such differences and complications as have been lately playing sad havoc with business, to the serious cost and vexation of parties wholly blameless for the asserted grievances at issue.

California Milling..... 98 1/4 @ 1 02 1/4  
Cal. No. 1 shipping, alongside..... 95 @ 97 1/2  
Oregon Valley..... 95 @ 98 1/4  
Washington Blue Stem..... 95 @ 1 02 1/4  
Washington Club..... 92 1/4 @ 97 1/4  
Off qualities wheat..... 90 @ 92 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	68 1/4 @ 68 1/2	58 1/2 @ 58 1/2
Freight rates.....	42 1/4 @ 45 1/2	36 1/4 @ 37 1/4
Local market.....	1 02 1/4 @ 1 05	95 @ 98 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, 99 @ 98c.  
May, 1902, delivery, 1.02 @ 1.04.  
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at 98 1/4 @ 98 1/2; May, 1902, 1.03 1/2 @ —.

### FLOUR.

The market is quiet and lacking in strength, although quotable values remain as previously noted. Supplies are of fair proportions, and it is probable that arrivals and offerings will show increase in the near future, as numerous mills which had been temporarily closed down have resumed operations.

Superfine, lower grades..... 32 25 @ 2 40  
Superfine, good to choice..... 2 50 @ 2 75  
Country grades, extras..... 3 00 @ 3 25  
Choice and extra choice..... 3 25 @ 3 50  
Fancy brands, jobbing..... 3 50 @ 3 65  
Oregon, Bakers' extra..... 2 75 @ 3 15  
Washington, Bakers' extra..... 2 75 @ 3 25

### BARLEY.

This cereal is still going aboard ship in considerable quantity for Europe, and some shipments are being made to the Atlantic side of this country, but offerings continue to keep ahead of requirements,

and there is consequently no opportunity for the market developing firmness. There have been no appreciable changes in quotable values for export grades, but top figures have not been readily realized, being more in accord with the prices asked by sellers than with the bids of shippers. In feed descriptions not much was done, and to effect prompt sales concessions to buyers were in most instances necessary. The speculative market was slow and without particularly noteworthy feature.

Feed, No. 1 to choice..... 72 1/4 @ 75  
Feed, fair to good..... 70 @ 72 1/4  
Brewing, No. 1 to choice..... 75 @ 82 1/4  
Chevalier, No. 1 to choice..... 97 1/4 @ 1 02 1/4  
Chevalier, poor to fair..... 75 @ 90

### OATS.

There is not much doing in a wholesale way, dealers as a rule not caring to operate extensively at full current figures and not being able to obtain very pronounced concessions in their favor, especially on desirable qualities. A fair demand is being experienced for seed oats and in a small way they are selling at higher figures than are warranted as quotations.

White Oats, fancy feed..... 1 20 @ 1 25  
White, good to choice..... 1 15 @ 1 20  
White, poor to fair..... 1 00 @ 1 10  
Gray, common to choice..... 1 00 @ 1 17 1/2  
Milling..... 1 15 @ 1 25  
Surprise, good to choice..... 1 22 1/2 @ 1 27 1/2  
Black Russian..... 85 @ 1 15  
Red..... 95 @ 1 20

### CORN.

Market continues to be lightly stocked and against buyers. Present offerings are mainly Eastern product. California corn is expected to put in an appearance in something like wholesale quantity in a few weeks.

Large White, good to choice..... 1 70 @ 1 75  
Large Yellow..... 1 65 @ 1 70  
Small Yellow..... 1 75 @ —  
Eastern, in bulk (carload lots)..... 1 57 1/2 @ 1 65

### BEANS.

Arrivals are of fair proportions, but are mainly from the Sacramento river section, although new crop beans, more particularly Limas, are beginning to come forward from the southern part of the State. Market for Limas is unsettled and lower, as is to be expected with a new crop coming on the market, and the only yield of this variety of noteworthy dimensions in the past three years. Old crop Limas sold about a week ago in a small way up to \$6, and this week new were offering in carload lots at \$4.75. Small White and Pea beans are quotably lower, with demand not very brisk at the reduced figures, although offerings of these varieties are not heavy, nor are very low prices likely to be established. Lady Washingtons are in heaviest spot supply of any description of white beans. In the line of colored beans, Bayos are most in evidence, but are meeting with fair inquiry at current rates.

Pea, fair to good, 100 lbs..... 4 00 @ 4 50  
Small White, good to choice..... 3 50 @ 4 00  
Lady Washington..... 2 40 @ 2 65  
Pinks..... 2 40 @ 2 60  
Bayos, good to choice..... 2 40 @ 2 65  
Reds..... 3 00 @ 3 25  
Red Kidney..... 3 50 @ 4 00  
Limas, good to choice..... 4 75 @ 5 00  
Black-eye Beans..... 3 25 @ 3 50  
Garbanzos, large..... 2 00 @ 2 25  
Garbanzos, small..... 1 25 @ 1 50

### WOOL.

Demand continues fair for wools of fine fiber, more particularly for free stock or fleeces showing slight shrinkage in scouring. Choice Northern Fall is receiving the most attention, with little of this sort now offering here, or remaining unplaced in this center, and values for same are quite steady. Coarse and medium wools are quiet at unchanged quotations.

Southern, defective, 7 mos..... 7 @ 8  
Oregon Valley, fine..... 14 @ 15  
Oregon Valley, coarse to medium..... 12 @ 13  
Eastern Oregon, choice..... 11 @ 13  
Eastern Oregon, fair to good..... 9 @ 10  
Nevada, as to condition..... 10 @ 12

### FALL.

Humboldt and Mendocino..... 11 @ 12  
Northern Mountain, free..... 9 @ 11  
Northern Mountain defective..... 8 @ 9  
Middle Counties..... 8 @ 10  
San Joaquin and Plains..... 6 1/2 @ 8 1/4  
San Joaquin Lambs..... 7 1/4 @ 9

### HOPS.

There is some inquiry for hops, both for shipment and on local account, but buyers are not bidding in very close conformity with the ideas of growers. On local account, some favorite marks of superior quality might be placed at a moderate advance on quotations, but to effect sales in anything like wholesale fashion, figures within range of those below noted have to be accepted.

Good to choice, 1901 crop..... 11 @ 13

### HAY AND STRAW.

Receipts of hay have shown considerable increase during the past week or ten days, but offerings have as a rule met with

tolerably prompt sale, without any material disturbance in values. Stablemen were of necessity compelled to run on light stocks during the recent strike, and are now storing rather heavily to make up as much as possible for lost time.

Wheat, good to choice..... 7 50 @ 10 50  
Wheat and Oat..... 7 00 @ 9 50  
Oat..... 6 50 @ 9 00  
Alfalfa..... 8 50 @ 10 50  
Clover..... 5 50 @ 7 00  
Stock..... 5 00 @ 7 00  
Compressed..... 8 00 @ 10 00  
Straw, 1/2 bale..... 25 @ 40

### MILLSTUFFS.

Bran is in increased supply and is offering at easier figures than lately current, with prospects of ruling still lower in the near future. Tendency of prices on other mill off was in favor of the buyer. Previously quoted rates on Milled Corn continued to be maintained. Rolled Barley was marked down 50c per ton.

Bran, 1/2 ton..... 19 50 @ 20 50  
Middlings..... 20 00 @ 22 00  
Shorts, Oregon..... 19 50 @ 20 50  
Barley, Rolled..... 16 50 @ 17 00  
Cornmeal..... 34 00 @ —  
Cracked Corn..... 35 00 @ —

### SEEDS.

There is a moderate movement in Mustard seed, with offerings of the Trieste variety larger than of Yellow, in consequence of which the market for the latter sort shows the most firmness. Business doing in Bird seed is of a light order, but at generally steady values.

Flax..... 2 65 @ 3 25  
Mustard, Yellow..... 3 15 @ 3 25  
Mustard, Trieste..... 2 85 @ 3 00  
Canary..... 3 1/4 @ 3 1/4  
Rape..... 1 1/4 @ 2 1/4  
Hemp..... 3 1/4 @ 3 1/4

### BAGS AND BAGGING.

Business is of insignificant volume at present in bags or bagging of any description. In quotable values, based on asking figures of holders, there are no changes to note.

Calcutta Grain Bags, spot..... 7 1/4 @ 7 1/4  
San Francisco Grain Bags, 22x36, spot..... 7 @ 7 1/4  
Wool Sacks, 4 lbs..... 3 1/2 @ 3 1/2  
Wool Sacks, 3 1/2 lbs..... 3 1/2 @ 3 1/2  
Fleece Twine..... 8 1/4 @ —  
Gunnies..... — @ —  
Bean Bags..... 5 1/4 @ 5 1/4  
Fruit Sacks, cotton, three sizes..... 5 1/2, 6, 6 1/4  
Fruit Sacks, Jute..... 7 @ 7 1/4

### HIDES, PELTS AND TALLOW.

The Hide market is moderately firm, with fairly good demand, sufficient to absorb at full current figures all offerings in merchantable condition. Pelts are commanding generally unchanged figures, but movement is not particularly active. Tallow of desirable quality is not lacking for custom and prevailing values are being well maintained.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	11 @ —	9 1/4 @ —
Medium Steers, 48 to 56 lbs.....	10 @ —	8 1/4 @ —
Light Steers, under 48 lbs.....	9 @ —	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	9 @ —	8 @ —
Stags.....	8 1/4 @ —	— @ —
Wet Salted Kip.....	9 @ —	8 @ —
Wet Salted Veal.....	9 @ —	8 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	15 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 75 @ —	— @ —
Salted Horse Hides, medium.....	2 25 @ —	— @ —
Salted Horse Hides, small.....	1 25 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 25 @ —	— @ —
Dry Colts' Hides.....	50 @ —	— @ —
Pelts, long wool, 1/2 skin.....	75 @ 100	— @ —
Pelts, medium, 1/2 skin.....	50 @ 75	— @ —
Pelts, short wool, 1/2 skin.....	30 @ 40	— @ —
Pelts, shearing, 1/2 skin.....	10 @ 25	— @ —
Deer Skins, best summer.....	35 @ —	— @ —
Deer Skins, good medium.....	— @ 30	— @ —
Deer Skins, thin winter.....	— @ 23	— @ —
Elk Hides.....	10 @ 12	— @ —
Tallow, good quality.....	5 @ 5 1/4	— @ —
Tallow, No. 2.....	4 @ 4 1/4	— @ —
Goat Skins, perfect.....	30 @ 37 1/2	— @ —
Goat Skins, small.....	10 @ 20	— @ —
Kid Skins.....	5 @ 10	— @ —

### HONEY.

Offerings of both Comb and Extracted, especially of other than most select qualities, are ahead of the immediate demand at full current rates. There is little selling pressure, however, and market is ruling steady as to values.

Extracted, White Liquid..... 5 1/4 @ —  
Extracted, Light Amber..... 4 1/4 @ —  
Extracted, Amber..... 4 @ —  
White Comb, 1 lb frames..... 10 @ 12  
Amber Comb..... 7 @ 9  
Dark Comb..... 6 @ 7

### LIVE STOCK AND MEATS.

Beef has ruled steady since last review, with demand fair. In quotable values for Mutton there have been slight declines,

market showing weakness. Lambs coming forward are mainly yearlings and are selling close to the figures current on Mutton. Veal is in increased receipt and market for same presents an easy tone. Most of the large Veal is too poor to be desirable. Hog market was slightly firmer, but there was no pronounced advance on last quoted rates. Arrivals were hardly so large as preceding week.

Beef, first quality, dressed, net 1/2 lb..... 6 @ 6 1/4  
Beef, second quality..... 6 @ —  
Beef, third quality..... 5 1/4 @ —  
Mutton—ewes, 6 @ 7; wethers..... 6 1/4 @ 7  
Hogs, hard grain fed, medium..... 5 1/2 @ 6  
Hogs, small, fat..... 5 1/2 @ 6  
Hogs, large, hard..... 5 1/2 @ 5 1/2  
Hogs, country dressed..... 7 1/4 @ 7 1/4  
Veal, small, 1/2 lb..... 7 @ 9  
Veal, large, 1/2 lb..... 7 @ —  
Lamb, spring, 1/2 lb..... 7 1/4 @ 8

### POULTRY.

Heavy arrivals of Eastern poultry the past week, in connection with fairly liberal receipts of California product, caused the market for most kinds to incline against sellers. A large proportion of the Eastern received was young stock. Seven carloads of imported arrived, in addition to a considerable quantity of dressed or ice-house poultry. With such free receipts from the other side of the Rockies, the market could not be otherwise than weak.

Young Turkeys, full grown..... 13 @ 16  
Hens, California, 1/2 dozen..... 3 50 @ 5 00  
Roosters, old..... 3 50 @ 4 00  
Roosters, young (full-grown)..... 3 50 @ 4 50  
Fryers..... 3 25 @ 3 50  
Broilers, large..... 3 00 @ 3 25  
Broilers, small..... 2 25 @ 2 50  
Ducks, old, 1/2 dozen..... 3 00 @ 3 50  
Ducks, young, 1/2 dozen..... 3 00 @ 4 00  
Geese, 1/2 pair..... 1 50 @ 1 75  
Goslings, 1/2 pair..... 1 50 @ 1 75  
Pigeons, old, 1/2 dozen..... 1 25 @ 1 50  
Pigeons, young..... 1 75 @ 2 00

### BUTTER.

Fancy fresh is in light supply and is meeting with a tolerably firm market, some favorite makes going to special custom at an advance on quotations. Of the more common grades of fresh, however, there is more than enough to accommodate the demand, the majority of buyers giving cold storage butter the preference over other than most select fresh.

Creamery, extras, 1/2 lb..... 28 @ —  
Creamery, flists..... 24 @ —  
Creamery, seconds..... 21 @ 22  
Dairy, select..... 23 @ 24  
Dairy, firsts..... 20 @ 21  
Dairy, seconds..... 18 @ —  
Mixed store..... 14 @ 16  
Creamery in tubs..... 19 @ 21  
Pickled Roll, 1/2 lb..... 19 @ 21  
Firkin, California, choice to select..... 18 @ 30  
Firkin, common to fair..... 16 @ 17 1/4

### CHEESE.

Market is not burdened with an excess of offerings of either domestic or Eastern. Demand is fair, and current values are being in the main well maintained, sales being made in a small way above rates quoted.

California, fancy flat, new..... 11 @ —  
California, good to choice..... 10 @ 10 1/4  
California, fair to good..... 9 1/4 @ 10  
California, "Young Americas"..... 12 @ 12 1/4

### EGGS.

Values for fresh show a wide range, and only for the choicest, suited in every way to the most exacting trade, can the market be termed firm. Ordinary fresh have to come into direct competition with cold storage eggs, and are sold down on a par with latter. There are large offerings of cold storage stock, both California and Eastern.

California, select, large, white and fresh..... 37 @ —  
California, select, irregular color & size..... 32 @ 33  
California, good to choice store..... 22 1/4 @ 27 1/4  
California, common to fair store..... 18 @ 20  
Eastern, good to choice..... 20 @ 21  
Cold Storage..... 20 @ 25

### VEGETABLES.

The Onion market has shown firmness, with quotations at a little higher range than last noted. The last steamer for Australasia carried 1,426 crates. Tomatoes were in tolerably heavy receipt, as compared with the demand for immediate use, and prices averaged lower than preceding week. Other vegetables in season went at much the same figures as last quoted, but the general trend of values was in favor of the consuming interest.

Beans, String, 1/2 lb..... 2 @ 2 1/4  
Beans, Lima, 1/2 sack..... 1 00 @ 1 25  
Cabbage, choice garden, 1/2 100 lbs..... 50 @ 75  
Cauliflower, 1/2 dozen..... 40 @ 50  
Corn, Green, 1/2 sack..... 50 @ 75  
Corn, Green, Alameda, 1/2 large crato..... 65 @ 100  
Cucumbers, Bay, 1/2 large box..... 25 @ 40  
Egg Plant, 1/2 box..... 35 @ 50  
Garlic, 1/2 lb..... 2 @ 3  
Okra, Green, 1/2 lb..... 40 @ 50  
Onions, Yellow Danver, 1/2 cental..... 1 00 @ 1 30  
Peas, Sweet garden, 1/2 lb..... 2 @ 2 1/4  
Peppers, Green Chile, 1/2 sack..... 35 @ 50  
Peppers, Bell, 1/2 box..... 40 @ 50  
Squash Summer, 1/2 small box..... 25 @ 40  
Summer Squash, Bay, 1/2 large box..... 50 @ 75  
Tomatoes, 1/2 large box..... 25 @ 40  
Tomatoes, 1/2 small box..... 15 @ 25



## POTATOES.

There has been a quiet market for potatoes during the current week, the shipping demand continuing slow, outside buyers drawing present supplies mainly from Colorado, Oregon and Michigan, prices in these sections having been lately relatively lower than in this State. Choice qualities are selling on local account to very fair advantage. Sweet potatoes were offered rather freely, as compared with demand, and market presented an easy tone.

Burbanks, Salinas, 100 lbs.	1 15	@ 1 40
San Leandro, in sacks, 100 lbs.	1 00	@ 1 25
River Burbanks in sacks, 100 lbs.	40	@ 1 00
Mission Garnet Chile, in sacks.	90	@ 1 15
Sweets, new, 100 lbs.	40	@ 1 00

## The Fruit Market.

## FRESH FRUITS.

Apples were in increased receipt, and for other than strictly choice the market lacked firmness. Many of the Apples offering are wormy, moth or otherwise faulty, and for stock of this sort the demand is slow, even at low figures. Choice 4-tier stock did not lack for attention and brought as a rule good prices. In the line of Pears, Winter Nelis are now taking the lead in the point of favor, although they have to be large, sound and ripe, to sell readily or command good figures, and there are not many at present obtainable of this description. Peaches were in reduced receipt, and where of desirable quality, brought better average prices than lately current. Plums make a poor showing as to quantity or variety; outside of Coe's Late Red there are hardly enough to warrant quoting. Figs were in light receipt and mostly in poor condition, owing to damage from wet weather, and in consequence met in most cases with slow sale. Table Grapes, other than Seedless, were in fairly liberal receipt, and for the ordinary run of offerings the market inclined against sellers. Wine Grapes were not plentiful, and choice were in the main quite firmly held. Berries of the cultivated varieties arrived sparingly, but demand for them was not active and prices kept at a rather low range. Whortleberries were in fair request at previously quoted range of values. Melon season is nearly ended. Cantaloupes and Nutmeg Melons in prime to choice condition sold at a moderate advance.

Apples, fancy, 4-tier box.	1 25	@ 1 50
Apples, good to choice, 50-lb. box.	50	@ 1 00
Apples, common to fair, 50-lb. box.	35	@ 50
Apples, green, 50-lb. box.	35	@ 60
Blackberries, 100 lbs.	3 00	@ 5 00
Cantaloupes, 100 lbs.	75	@ 1 25
Figs, 100 lbs.	30	@ 75
Grapes, Cornechon, 100 lbs.	50	@ 75
Grapes, Isabella, 100 lbs.	40	@ 65
Grapes, Black, 100 lbs.	30	@ 50

Grapes, Muscat, 100 lbs.	20	@ 50
Grapes, Tokay, 100 lbs.	30	@ 50
Grapes, Zinfandel, 100 lbs.	30	@ 33 00
Grapes, White, 100 lbs.	20	@ 27 50
Logan Berries, 100 lbs.	—	@ —
Nutmeg Melons, 100 lbs.	40	@ 75
Peaches, 100 lbs.	30	@ 65
Pears, Winter Nelis, 40-lb. box.	75	@ 1 25
Pears, other kinds, 100 lbs.	40	@ 75
Plums, 100 lbs.	25	@ 75
Pomegranates, 100 lbs.	50	@ 1 00
Prunes, 100 lbs.	50	@ 1 00
Quinces, 100 lbs.	40	@ 65
Raspberries, 100 lbs.	5 00	@ 7 00
Strawberries, Longworth, 100 lbs.	6 00	@ 7 00
Strawberries, Large, 100 lbs.	3 50	@ 5 00
Watermelons, 100 lbs.	3 00	@ 15 00
Whortleberries, 100 lbs.	6	@ 8

## DRIED FRUITS.

There is not much doing in the dried and evaporated fruit market, either in transfers from first or second hands, in a wholesale or jobbing way. That the market is slow is due largely to the fact that it is not in favorable condition for either buyers or sellers. The season's output of other than the latest fruit is mainly in second hands, and, having been mostly purchased on an active and firm market, is being held at stiffer prices than large or wholesale Eastern buyers are at present willing to pay. Local handlers are consequently slow about taking in any further supplies at this date, unless temptingly low prices prove acceptable to sellers, or less than any figures warranted as regular quotations. Thus, to purchase freely of either Apricots, Apples, Peaches or Plums, full current figures or more would have to be paid, while to sell freely from first hands, inside quotations would have to be shaded materially in favor of buyers. Jobbers are anxious to reduce stocks, and to effect transfers of noteworthy magnitude would in most instances strain a point to make terms satisfactory to the purchaser rather than miss such custom. Old Prunes are being offered in considerable quantity on the 3@3½c. basis for the four sizes, about 1400 carloads being still unplaced, but these figures do not attract buyers of old stock to any noteworthy degree. New Prunes could be placed on the 3@3½c. basis, but they are not quotable under 3½@3¾c., and there is no evidence that any very heavy quantities could be secured on latter basis.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.	7½	@ 8
Apricots, Royal, choice, in sacks, 100 lbs.	9	@ 10
Apricots, Moorpark.	10	@ 12½
Apples, in 50-lb boxes, rings, pressed, fancy.	7½	@ 8
Apples, 50-lb boxes, rings, pressed, good to choice.	6½	@ 7
Figs, pressed.	5	@ 7½
Nectarines, 100 lbs.	5	@ 6½
Peaches, unpeeled, fancy.	7	@ 7½
Peaches, unpeeled, choice.	6	@ 6½
Peaches, peeled, in boxes.	12	@ 14
Pears, halves, choice to fancy.	7½	@ 9
Plums, Red and Black, platted.	5	@ 6
Plums, White and Yellow.	5	@ 6
Prunes, 4 sizes, in bags, 3@3½c; 50-60s, 4½@4¾c; 60-70s, 3½@4c; 70-80s, 3¼@3½c; 80-90s, 2¾@3c; 110s and less, 2@—c; these figures for 1900 crop; New Prunes, ½@¾c. bigger.		

## COMMON SUN-DRIED.

Apricots.	6	@ 7
Apples, sliced.	3½	@ 4½
Apples, quartered.	3½	@ 4½
Figs, Black.	2½	@ 3
Figs, White.	2½	@ 3½
Peaches, unpeeled.	5	@ 6
Pears, prime halves.	5	@ 6
Plums, unpitted, 100 lbs.	1½	@ 2½

## RAISINS.

Sales are being made for forward delivery at the extremely low rates recently announced by the Growers' Association, there being no trouble to secure buyers at these figures, but there is some question about the possibility of making heavy deliveries at the prices named, numerous growers asserting their unwillingness to surrender their fruit on this basis. The market is unsettled, with the future very poorly outlined.

Two-crown London layers, per 20-lb box	\$1 25
Three-crown London layers " " "	1 35
Four-crown, fancy clusters " " "	1 75
Five-crown, Dehesa clusters " " "	2 50
Six-crown, Imperial clusters " " "	3 00
Two-crown Standard Loose Muscatels, 100 lbs.	3½c
Seedless Muscatels, 100 lbs.	4½c
Three-crown Standard Loose Muscatels, 100 lbs.	4½c
Four-crown Standard Loose Muscatels, 100 lbs.	4½c
Bleached Thompson Seedless—	
Extra Fancy, 100 lbs.	11 c
Fancy, 100 lbs.	10 c
Choice, " " "	9 c
Standard, " " "	7½c
Prime, " " "	6½c
Thompson Seedless, 100 lbs.	6½c
Sultanas, Fancy, 100 lbs.	8½c
" Choice, 100 lbs.	7½c
" Standard, 100 lbs.	6½c
" Prime, 100 lbs.	6½c
" Seedless, 100 lbs.	5½c

## CITRUS FRUITS.

Last crop Valencia are offering at unchanged rates and are moving slowly. Not for at least several weeks are new crop Navels expected on market in quotable quantity. Lemon market shows no quotable improvement, supplies being lib-

eral and demand not very brisk. Grape fruit, new crop and rather green, is selling in a small way at \$1.75 for quarter boxes and \$2.25 for halves. Limes are in light stock and prime are steadily held.

Oranges—Valencias, 100 lbs.	1 50	@ 3 50
Lemons—California, select, 100 lbs.	2 50	@ —
California, good to choice.	1 75	@ 2 25
California, common to fair.	1 00	@ 1 05
Limes—Mexican, 100 lbs.	6 00	@ 6 50

## NUTS.

Market for Almonds and Walnuts is without quotable change, but some non-Association stock is selling at concessions from full current figures. Peanuts are not in heavy supply and are in moderate request, prices ruling steady.

California Almonds, shelled.	18	@ 22
California Almonds, paper shell, 100 lbs.	12	@ 13
California Almonds, soft shell.	10	@ 12
California Almonds, hard shell.	6	@ 7
Cal. White Walnuts, No. 1 soft shell.	9½	@ —
Cal. White Walnuts, No. 2 soft shell.	7½	@ —
Cal. White Walnuts, No. 1 hard shell.	9	@ —
Cal. White Walnuts, No. 2 hard shell.	7	@ —
Peanuts, California, fair to prime.	4½	@ 5½
Peanuts, Eastern, band-picked.	5½	@ 6
Pine Nuts.	5	@ 6

## WINE.

The wine market remains inactive, so far as wholesale transfers from first hands are concerned, the dullness being due to lack of offerings and not to absence of demand. The grape yield is now receiving the bulk of attention of wine men. Dry wine grapes are selling at a very wide range, if all reports are to be credited. Purchases are claimed to have been made as low as \$20 per ton in districts where there are few cellars and little or no competition among buyers. On the other hand, Zinfandels have been quoted up to \$33 in the San Francisco market, but the latter figure is obtainable only in a small way, and is hardly warranted as a quotation, even on small lots. Most of the business in dry wine grapes is within range of \$24@27 per ton at interior points.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/4 sacks.	101,320	1,692,738
Wheat, centals.	278,508	1,271,497
Barley, centals.	313,648	2,007,236
Oats, centals.	34,188	335,958
Corn, centals.	1,743	19,138
Rye, centals.	2,585	14,850
Beans, sacks.	23,036	90,437
Potatoes, sacks.	24,214	391,194
Onions, sacks.	5,996	86,815
Hay, tons.	4,379	42,056
Wool, bales.	1,795	22,958
Hops, bales.	1,013	1,715

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/4 sacks.	95,036	1,288,052
Wheat, centals.	216,604	1,012,563
Barley, centals.	331,821	1,518,865
Oats, centals.	30	1,530
Corn, centals.	100	7,992
Beans, sacks.	483	2,654
Hay, bales.	142	919
Wool, pounds.	—	341,316
Hops, pounds.	40,007	119,207
Honey, cases.	57	1,504
Potatoes, pack's.	1,233	10,482

## California Dried Fruit at New York.

NEW YORK, Oct. 9.—Evaporated apples, common, 6@8c; prime wire tray, 8½@8¾c; choice, 9c; fancy, 9½@9¾c. California Dried Fruits.—Business is of light volume, but at generally unchanged values. Prunes, 3½@7c. Apricots, Royal, 8½@12½c; Moorpark, 9@13c. Peaches, unpeeled, 6@9½c; peeled, 11@15c.

Telephone Main 199.

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PLACE olives in solution composed, 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove tartness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 6 oz. salt to 1 gallon water for 7 days. Put in brine 10 oz. salt to gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles scalded in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

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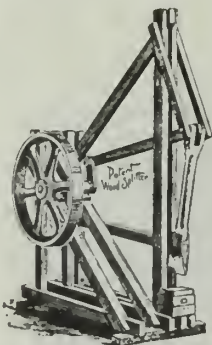
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## THE FIELD.

### Trapping Coyotes.

To THE EDITOR:—In your paper of Sept. 28, 1901, "Subscriber" wants to know how to trap the coyote. I seldom use anything to attract the coyote to the traps, for the reason that what will lead the coyote will also lead other animals. Now the coyote's life is composed of ninety-nine parts of good luck. You will see this by the fact that other animals will find the traps first. Usually two or three dogs and rabbits, skunks, coons, badgers, with two or three Thomas cats sandwiched between the other animals, will be caught ahead of a coyote.

How TO TRAP THE COYOTE.—Get two large double spring steel traps. They cost about 50 cents apiece. Coyotes do not travel much in paths or roads while looking for a meal, so it is necessary to select a place where there is a hole in the fence, or at a corner, or where there is a bridge, some place like that. Then bury the traps and cover with fine soil. The inside jaws should be about 6 or 7 inches apart. Place a stick of stove wood about 2 inches in diameter between the inside jaws on top of the ground. Animals will always step over a stick, and not on it. This guides their feet into the traps. Then throw a little brush or weeds at each end of the traps to guide the coyote over the traps, leaving an open space of about a foot wide for him to walk through.

Set the traps at night and spring them in the morning if they have not been disturbed. Seldom can any animal pass over two traps if set as above directed. Make the traps fast to a fence with a chain or something strong enough to hold the animals after they are caught.

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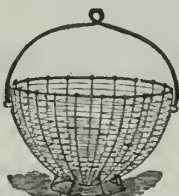
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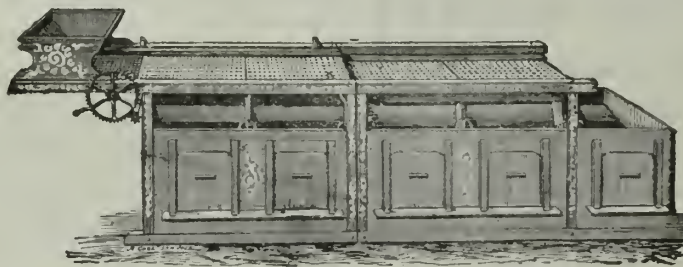
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FOR A MARE.

TO THE EDITOR:—Be so kind as to tell me what to do for my mare. She is very loose in her bowels when driven. I am feeding on new wheat and oat hay, also am giving her two quarts of dry shorts, but it seems to make no difference.—READER, Campbells.

Your mare's looseness of bowels can be corrected by feeding her nothing but dry feed. Limit the amount of water she drinks to small quantities and often. You must not water her before starting or on the road. Mix a tablespoonful of powdered catechu in her feed night and morning. Barely dampen the feed, so that the powder will stick to it.

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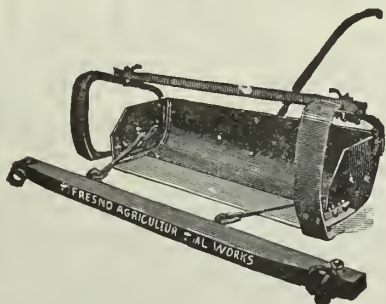
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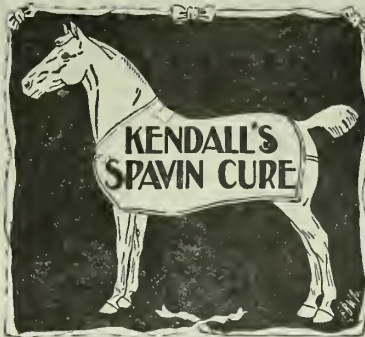
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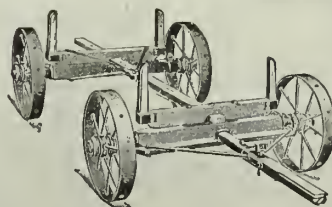
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## Farmers' Handy Wagon

FOR USE IN FIELD AND ORCHARD.

A Good Low Down Truck for the Fruit Grower.

SOLD BY

**BAKER & HAMILTON,**  
SAN FRANCISCO. SACRAMENTO. LOS ANGELES.

## \$50.00 RANGE FOR \$25.00

TO INTRODUCE THE

**WILLARD STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/2 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. **WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Dept. 8.** Will ship O. O. D. with privilege of examination.





## Agricultural Review.

### ALAMEDA.

**GRAIN WAREHOUSE COLLAPSES.**—R. Velmer & Co. had filled their warehouse at Decote to the very roof with grain which they had purchased from the farmers of Washington township. The inability of the farmers to get their grain to a market in San Francisco, or to the shipping at Port Costa, made the purchase of grain a profitable investment. In some way the underpinning of the warehouse gave way, the warehouse burst wide open and the grain was spread over the country for hundreds of feet around. The loss is about \$5000, and falls entirely upon the Volmer Company, for they purchased the grain outright and owned the contents of the warehouse.

### BUTTE.

**MANY HEAD OF STOCK.**—Oroville Register: Joel Flinn, one of the most experienced stockmen in this county, was down from Berry creek this week. In company with several other stock raisers on Berry creek, he drove between sixty and seventy head of beef cattle to the Ord ranch, where they were sold to Royman & Evans. Mr. Flinn says this firm had about 8000 head of cattle on hand and 800 more were expected within a few days from one of the northern counties. In addition to the Ord ranch on Feather river, they have a very large pasture—4x8 miles—leased on Butte creek.

**THE SHEEP INDUSTRY.**—Oroville Register: Many sheep have been brought down from the hills and are being sheared at the present time in this part of Butte. The greater portion of these animals are driven to the mountains in the summer and range on the high summits in Butte and Plumas. V. Gianella of Honcut drove down this fall and will shear fully 7000 head. Wm. Dunstone of Wyondette will shear 2000, and T. J. Farnan, whose sheep range on Brush creek in summer, will shear 3000; Andy Turner, whose sheep range on the west side of the Feather in South Thermalito in winter, has 3000; Senator Shippee of Avon will shear 3000, while the sheep owned by Robert Campbell and the Campbell estate will number about 3500; this band is pastured in summer on a high range west of Mountain Meadows. Neil McKillop, in the Sundale section, has about 2000 head; Barney Musholt of Biggs drove down and is shearing 3000. These constitute the principal bands of sheep in this part of the county. The usual average of the clips in the fall of the year is about four pounds, but the band of Senator Shippee's this fall gave an average of five pounds to each sheep. Wool is at present worth 10 cents per pound. Almost every one who has sheep is now making money out of them.

### CONTRA COSTA.

**HURRYING GRAPE PICKING.**—A Clayton correspondent of the Oakland Enquirer says: Grape picking was delayed for a few days this week, owing to the fermenting tanks being full. Never before were grapes picked and hauled with such a rush as they have been this season, all owing to the prevailing unsettled condition of the weather, which daily threatens to precipitate rain.

### KINGS.

**HOW TO KILL JOHNSON GRASS.**—Hanford Sentinel: Speaking of Johnson grass and the killing of the stuff, J. C. Ensign says it is easy. He says to plow it, or, rather, cut it off under the surface with a weed cutter occasionally, often enough so that it will not get through the surface of the soil, and then the grass will die for want of breath.

**JAPANESE PLUMS.**—Hanford Sentinel: N. W. Motheral has several trees that are bearing what are called Japanese plums. The fruit is about the size of a medium-sized nectarine and very much the shape of the latter. When ripe the plum is of a bright olive green, and it is of the most delicious flavor, has a free pit, and the grain of the fruit resembles the Simoni prune, but the bitterness of the inner skin of the latter is absent. The trees are heavy bearers.

### LOS ANGELES.

**GROWING COTTON.**—Los Angeles Herald: Colonel C. P. Wimberly, a former cotton grower of Alabama, now an orange orchardist in Redlands, has growing upon his place twenty stalks of cotton that are 5 feet high and 4 feet wide. They are full of squares, bloom and bolls. Colonel Wimberly estimates that an acre of like cotton plants will produce 500 pounds, or a full bale of lint cotton. They are growing in sandy soil, doing as well as like plants do in Alabama, ready for picking at the same season, and the product is as good as is grown anywhere.

### MONTEREY.

**ALFALFA AND DAIRYING.**—Salinas In-

dex: J. S. Berenda, near the Graves warehouse and 4 miles west of Salinas, is building a large barn to be used for a silo. He had a few cows and the milk from these cows he took to the creamery at Castroville. The enterprise proving satisfactory, he concluded to add to his dairy and is now milking thirty cows. He sunk an artesian well one year ago and obtained a fine flow of water. He sowed alfalfa, which proved a success, and, instead of brown, barren fields at this season of the year, acres of alfalfa and fat, sleek cows are now seen. Mr. Berenda learned that there were other industries that would pay better than raising barley at 60 cents a hundred. His neighbors are likewise growing alfalfa with success.

### SACRAMENTO.

**HOPS ARE MOVING EAST.**—Record-Union: Hops are being shipped East rapidly these days. The Felsom and Placer-ville train on Thursday brought down eight carloads from Manlove station.

**CHOICE GRAPES WITHOUT IRRIGATION.**—Record-Union: C. Bendix, of Franklin, Sacramento county, exhibits some fine grapes, raised on his place entirely without irrigation. He has one specimen that he calls the Christmas grape, because he says that it will keep fresh and juicy until Christmas. It somewhat resembles the Black Morocco, but is larger and richer in flavor. His Flaming Tokays and Muscats are of superior size. Another new product in this part of the State Mr. Bendix calls the Golden Champion, which is also very large.

### SAN BERNARDINO.

**FINE APPLES.**—Redlands Facts: There has been added to the display at the Beard of Trade rooms a number of very fine apples, of the Jonathan variety, from the Oaklign ranch of W. C. Lukens. They average five ounces in weight, are of good color and form, and came from trees said to be only three years old. Upper Yucaipe has in them a big "puff."

### SANTA BARBARA.

**CROP NOTES.**—Santa Maria Times: The first carload of white beans went forward this week, destined for New York City.—Something like 70,000 sacks of grain are arriving at the depot awaiting shipment. The railroad company, realizing that the platform cannot be cleared before the rains set in, has decided to build sheds in order to protect the large amount of grain.

**INCH MESH ENDORSED FOR WALNUT GRADING.**—Santa Barbara Press: A meeting of the Walnut Growers' Association was held at the Chamber of Commerce for the purpose of considering a proposition to increase the size of the grading mesh to conform with the new graders of some of the other associations. It was decided to hold to the inch mesh.

### SANTA CRUZ.

**PACKING HOUSES PEST BREEDERS.**—Watsonville Pajaronian: The establishment of packing houses at Pajaro is not viewed by orchardists of that place as an improvement. Pajaro is surrounded by young apple orchards, and it is a district which has been remarkably free from pests. With packing houses almost teaching its orchards, and with apples being hauled thereto from all districts within a radius of 10 miles, the claim is being made that the pests of infected orchards will be brought to the Pajaro district. This is a reasonable contention. Packing houses are the winter quarters for large colonies of these pests. Wherever apples are piled up, box on box, if there were any pests, such as codlin moth, in the orchards from which the fruit came, one would find plentiful evidences of the moth where the boxes rest on each other. Again, old boxes used for packing will work back and forth from orchards to packing houses; and the scale and moth were first brought to this valley in old boxes which were shipped over from San Jose.

**FRUIT NOTES.**—Pajaronian: Bellefleurs are heavier than usual this year, and but few cars containing over 700 boxes are going out. From a number of tests made it is safe to say that Bellefleurs are at least 5% over their average weight—and in some packing houses boxes have been found that were 10% over average. The Bellefleurs are solid this year, and they should be at their best as cold storage stock.—A car of apples was shipped from here Monday, the contents of which were of strange grading—and it has given rise to no end of talk among packers. The purchaser rejected all apples over the size of five-tier stock, and he accepted smaller sizes. The car averaged say six-tier stock and was made up of sizes for which there is seldom any sale. It is probable that these apples are intended for Alaskan or Siberian trade, where they will sell by the apple and not by weight.

**SUCCESSFUL SUGAR BEET CAMPAIGN.**—Watsonville Pajaronian: The big beet

mill at Spreckels is running along nicely and well up to its capacity of 3000 tons each day. Beets are being delivered by the bread and narrow gauge railroad lines and by wagons, and the daily receipts are not heavy enough to make any gain on the mill's capacity. King City and the section south of Spreckels are sending in a heavy tonnage daily, and the crop in those districts is quite heavy. The territory adjacent to the factory, and which sends in its beets in wagons, is being drawn on for a great part of the tonnage which is being sliced each day. The narrow gauge is increasing its offerings from the Moro Cojo and Pajaro valley, and the San Juan valley is doing better than for several years. The run is expected to continue into January, so enormous is the crop. The yield per acre is surprisingly large, fields in the vicinity of the mill showing eighteen tons per acre; 1901 is apt to be the banner sugar-beet year for a long time.

**BIG CROP OF ONIONS.**—Watsonville Pajaronian: The onion crop of the Pajaro valley is estimated at from 40,000 to 50,000 sacks, or about 2500 tons. The contract onions are sold at 45 cents a sack, delivered. The yield per acre is very heavy this year, and in some places the crop has run to 500 sacks an acre. James I. King, on thirty-five acres of land in the Beach road district, will average over 400 sacks per acre. This is a remarkable showing. The Morse Seed Company of Santa Clara, for which James I. King is the local manager, will have about 35,000 sacks of onions from 150 acres of land. The Pajaro onion crop is a money-winner this year, and this valley is one of the leading onion-growing districts of California.

### SONOMA.

**LIVELY AMATEUR HOP PICKER.**—Santa Rosa Press-Democrat: Little Miss Ruby Miller, daughter of Mr. and Mrs. T. Boone Miller of Windsor, is a phenomenal hop picker. A few days ago she started in picking hops in her father's yard on Russian river at 8:30 o'clock in the morning and kept at work until 5 o'clock in the afternoon. During these hours the winsome maiden did not lose a minute and picked just 140 pounds all by herself. She beat many older and more experienced hop pickers by this feat.

**WINE GRAPES IN ACTIVE DEMAND.**—Sebastopol Times: Activity among grape buyers is increasing and the price has leaped from \$20 per ton up to \$24. The rain has damaged the grapes to some extent, but this does not seem to affect the price, and buyers are more anxious for consignments now than they were ten days ago. J. L. Ross is paying \$24 per ton without any test and consequently he is buying large quantities of grapes. This season's grape crop is of rather inferior quality and it is almost impossible to get the required 22% of sugar. Consequently the growers who sell for \$24 per ton with the understanding that the grapes must reach the 22% mark are not in every instance pleased with their returns, as every degree under the 22% test means a loss to the grower of \$1.10. It is estimated that the crop this year is about one-half an average yield.

### SUTTER.

**WINE GRAPES BEING SHIPPED.**—Sutter County Farmer: The harvest of wine grapes is now on and most of the crop here will go to Sacramento. The yield is fair this season and quality good. About \$17 per ton is the average price paid in this vicinity.

**IRRIGATING ALMOND ORCHARDS.**—Sutter County Farmer: Down in Selano county Frank Palmer purchased an almond orchard about two years ago and proceeded to irrigate it thoroughly, with the result that from the two crops received he paid for the orchard and had money left.

**BUYING SHEEP.**—Sutter County Farmer: H. A. Woodworth and E. Fagan of Gridley last week purchased 250 head of lambs from S. J. Haugh, the well known stock dealer of this county. The purchasers intend to make the sheep business a prominent industry in the future, as far as they are concerned, being satisfied that there is more in pasturing the land and winter-sowing than there is in summer-fallowing and allowing the land to lie idle.

**RAISING SUGARCANE.**—Sutter Independent: J. L. Buckingham, a prominent orchardist in the Stewart tract, below Yuba City, is crushing his crop of sugarcane. Last winter he planted eighteen acres to cane with seed he obtained from Missouri, more as an experiment than for profit. The soil and climate proved to be conducive to a healthy growth of the plant, and he now has a fine field of sugarcane. He has purchased an outfit for grinding and crushing it and is making an excellent quality of sorghum, which he will sell in the market at 80 cents per gallon. He states that one acre of sorghum

cane will yield fifty gallons of sorghum. The actual cost of harvesting and crushing the cane is about \$15 per acre.

### TEHAMA.

**HOGS DYING.**—There has been a great mortality among the hogs of Tehama county by a lung disease, and in one instance of a band of 540 all but forty of them died. The disease seems to be an epidemic and in the atmosphere, and while it attacks a band, not all of the animals are affected in every case. It is a fact worthy of note that the hogs in good condition and flesh withstand the disease much better than those in poorer condition, and young hogs suffer first.

**CAUGHT IN A SNOW STORM.**—Red Bluff News: W. H. Conard's band of 4300 sheep arrived from the mountains Tuesday evening and passed through this place on the way to near Corning, where they will be kept this winter. Mr. Conard was a little late in getting out of the mountains and a few days ago got caught in a snow storm. At one time the snow laid 2 feet deep and he had difficulty in getting them ahead. He lost a few sheep in this storm, but he sent a man back after them and hopes to get them out this week.

**HOG MEN TO MEET.**—Red Bluff Sentinel: The loss of from two to four thousand hogs in Tehama county, from a disease that has appeared in Humboldt, Mendocino, Trinity, Shasta, Glenn and other northern counties has caused much anxiety among owners whose herds have not yet suffered. The remedy of Clinton Gregory, of Cottonwood creek, is declared to be partially successful, and it has been decided to hold a meeting of hog owners in this place at 2 o'clock next Saturday afternoon and invite Mr. Gregory to attend. The disease has killed hogs by thousands in Oregon, and at the meeting it has been suggested that an organization be effected and the Agricultural Department at Washington be asked to send an expert here to study the disease and provide a remedy if possible.

**WHITE LABORERS LOSE JOBS.**—Corning Observer: No more white laborers are to be hired in the beet fields on the Fennell ranch this season, so we are told. On Thursday the entire force, consisting of about 130 whites, were paid off. The work of harvesting the beets, which will last a couple of weeks longer, will be finished with Japanese and Chinese laborers, so it is said. The cause given for making the change is that many of the laborers shirked when the bosses were not around.

### TULARE.

**SOME GOOD CUTTING.**—Tulare Register: Out at I. N. Beaver's orchard in Oakland colony the peach cutting record must have been badly fractured, if not altogether broken recently, when six cutters, working eight hours, cut 6 tons and 200 pounds of fruit, and did it with ease. Miss Alice Runyan, a 14-year-old girl, cut 58 boxes and Mrs. Ed Weidman cut 56 boxes. At 5 cents a box they did not make bad wages for a day's work.

### VENTURA.

**BEAN THRESHING COMMENCED.**—Ventura Independent: Some of the first bean threshing of the season was done in Pleasant valley last week. The beans are turning out better than anticipated. In some places the "piles" have been "staked" in order to avoid expected east winds from scattering crops about the fields and causing the beans to shell, but so far no damaging winds have blown.

**BARLEY, BEANS AND BEETS.**—Hucneme Herald: Barley is turning out in larger yield than expected. The sugar factory officials expect to have the large acreage aligning the water front, which includes the leased lands from Bard & Perkins, planted to beets next campaign. The large Witman ranch, adjoining Hucneme on the west, will also go into beets. Beans are being rapidly cut and piled; and if the rains will only hold off awhile, they will be safely housed. The yield is estimated at 350,000 to 400,000 bags.

### YUBA.

**COYOTES BECOMING NUMEROUS.**—Wheatland Four Corners: To the north and east of Wheatland coyotes are becoming too numerous to be comfortable to the sheep men. The animals are seen daily by people who have occasion to drive out to the dredger or foothills, and their barking and cries can be heard along the river bottom almost every evening. Now that the sheep are coming down from the mountains, the sheep men have pooled their issues against these destructive pests, and have offered a liberal bounty for each one killed. We understand the bounty paid for each scalp is between \$15 and \$20. A hunter who understands the business should be able to make good money on these thieving animals if they are as plentiful as reports would seem to indicate.



Rain and sweat have no effect on harness treated with Eureka Harness Oil. It resists the damp, keeps the leather soft and pliable. Stitches do not break. No rough surface to chafe and cut. The harness not only keeps looking like new, but wears twice as long by the use of Eureka Harness Oil.

**EUREKA HARNESS OIL**



Sold everywhere in cans—all sizes. Made by Standard Oil Company

#### Improvements in Black Leg Vaccination.

The wide and successful use of Pasteur black leg vaccines in the United States and Canada has nearly completed its seventh year, which shows the real value of this remedy to the cattle raisers in those parts of the country where black leg is troublesome. The old powder form vaccine requiring a hypodermic syringe and set of instruments to mix, filter and inject it is being rapidly displaced by "Blacklegine," which is Pasteur black leg vaccine in the form of a cord, ready for use as sold, and is applied with a needle. When the cord form was devised and put to practical use in 1897 vaccination at once became more popular, as it was readily seen that the improved method was more simple but just as effective as the old. Cattle men who contemplate vaccinating their calves this fall will be glad to learn that an improved needle for applying "Blacklegine" is now being furnished, which renders vaccination more rapid and easier than ever. The improved needle is provided with a detachable handle and extra needle in case of accident. The handle and the two extra needles are called the "Blacklegine outfit," and cost only 50 cents. Cattle men who raise choice calves and who have been using Pasteur "double" vaccine (powder form) will be pleased to know that the double treatment is now furnished also in the cord form, known as "Double Blacklegine."

Write to Pasteur Vaccine Co. for pamphlet about the cause and nature of black leg and its successful prevention with Pasteur black leg vaccines, and also ask for illustrated price list of other valuable preparations of interest to live stock owners. Its head office is in Chicago, with branches or general offices in New York, Omaha, Kansas City, Denver, Fort Worth and San Francisco.

#### FRUIT MARKETING.

##### European Walnut Crops and Prices.

Special Consular Reports Received by the Pacific Commercial Museum of San Francisco.

Consul F. D. Chester of Budapest, Hungary, writes under date of Sept. 9: "Since the date of this Consulate's first report (July 16), the walnut crop of Hungary, according to latest statements of merchants here, has turned out to be a very good one. In particular, the Transylvanian, soft-skinned and large walnuts, which resemble the French product, are possible for export, together with Roumanian and Bulgarian walnuts put on the market here. On the contrary, Bosnian and Servian walnuts, which are hard-skinned and small, are not good and will not find any export except to Germany. The United States growers should notice that the good Hungarian nuts in previous years have been exported from here to England and thence to America as French walnuts. This year's export from Hungary to the united outside world will be the best for twenty-five years. The June and July advices, however, gave no promise of this. The crop will be picked about Nov. 10. The firm of Seggermann Bros., New York, has imported two lots of walnuts from Hungary in the last few weeks, showing that Hungary has still some of the old crop left.

"The prices are predicted as follows: Transylvanian, etc., \$5.10 per cwt., c. i. f. New York; Bosnian, etc., \$3.89 per cwt., c. i. f. New York."

##### A CABLE ABOUT FRENCH WALNUTS.

The following cable from U. S. Consul Skinner, at Marseilles, gives opening prices paid walnut growers in that district: "Opening prices new walnuts: Grenoble Mayettes, 11½c. per kilo (5½c. per pound) to 12c. per kilo (5½c. per pound); Grenoble Mayettes, Commercial or Courant, 10½c. per kilo (4½c. per pound) to 11c. per kilo (5c. per pound)."

STATE OF OHIO, CITY OF TOLEDO, } ss.  
LUCAS COUNTY,

FRANK J. CHENEY makes oath that he is senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

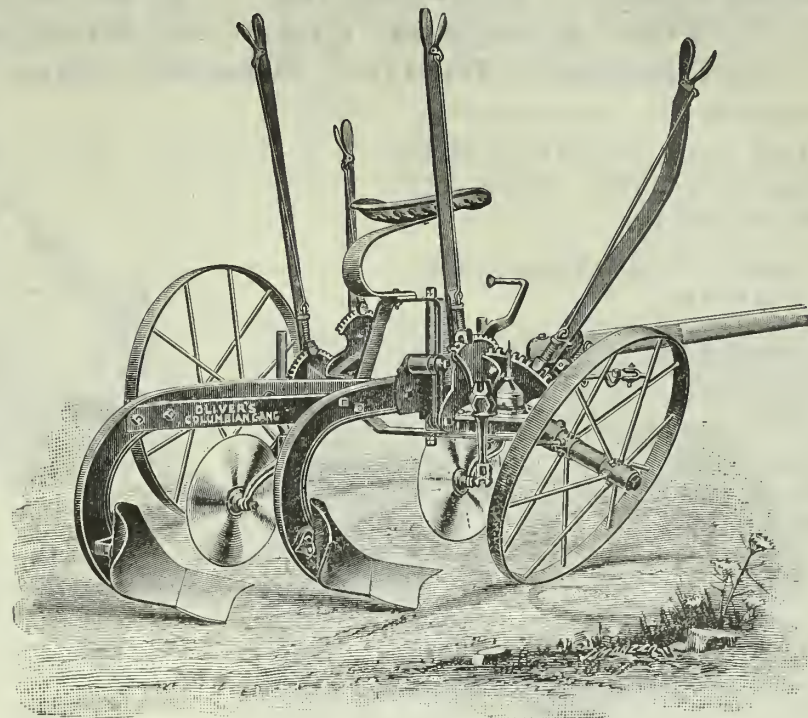
FRANK J. CHENEY.  
Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1896.

{SEAL} A. W. GLEASON,  
Notary Public.

Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75c.  
Hall's Family Pills are the best.

## "The Favorite of 'em All."



## OLIVER'S Columbian Gang.

Used successfully in difficult work where others fail. Fitted with chilled or steel bases in two sizes, 10 and 12 inch.

We will gladly mail to any farmer on application a lot of testimonials that convince.

**OLIVER CHILLED PLOW WORKS,**  
13 & 15 MAIN STREET, SAN FRANCISCO, CAL.

## Buffalo Pitts Spike Tooth Harrow.



THE ONLY SPIKE TOOTH HARROW SUITABLE FOR ORCHARD OR VINEYARD.

NOTICE THE FRAME—IT WILL NOT HARM THE TREES OR VINES.

Made in 2, 3, 4 or 5 sections.

ASK YOUR DEALER FOR IT.

## SANTANA & PERRY, WOOL COMMISSION MERCHANTS.

WOOL, HIDES AND PELTS. Advances Made on Consignments.

Agents for SCABCURA SHEEP DIP—THE PURE NICOTINE OF TOBACCO. Directions on every package. A sure cure for scab and ticks on sheep, also sure destroyer of parasites on fruit trees. Invaluable in the nursery.

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## SURREYS!

Canopy tops; only a few left. WE GUARANTEE 'EM. They are the kind that sell for \$135.00. You can have 'em this week for \$85.00. We have everything on wheels: Buggies, Carriages, Runabout Wagons, Freight and Farm Wagons, etc. WRITE OR CALL.

ALLISON, NEFF & CO.,  
222 MISSION STREET.....SAN FRANCISCO, CAL.

## FERTILIZERS!

NITRATE OF SODA supplying Nitrogen or Ammonia,  
THOMAS' PHOSPHATE POWDER supplying Phosphoric Acid,  
MURIATE and SULPHATE OF POTASH supplying Potash,

THE THREE ESSENTIAL ELEMENTS OF PLANT FOOD.

Can be supplied alone or mixed in any proportion to supply whatever deficiency may exist in the soil, thus paying only for what is lacking and necessary to replace.

BALFOUR, GUTHRIE & CO., 318 CALIFORNIA ST., SAN FRANCISCO.  
ALSO AT FRESNO AND LOS ANGELES.  
WRITE TO THEM FOR PAMPHLETS.

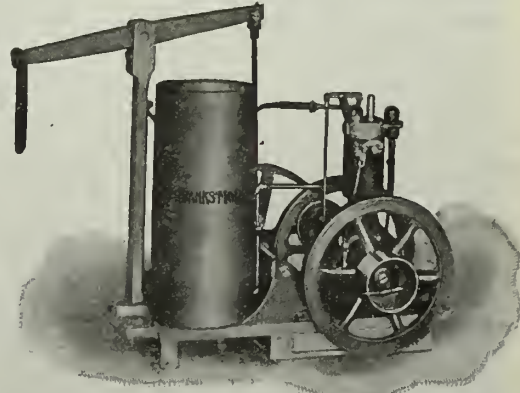
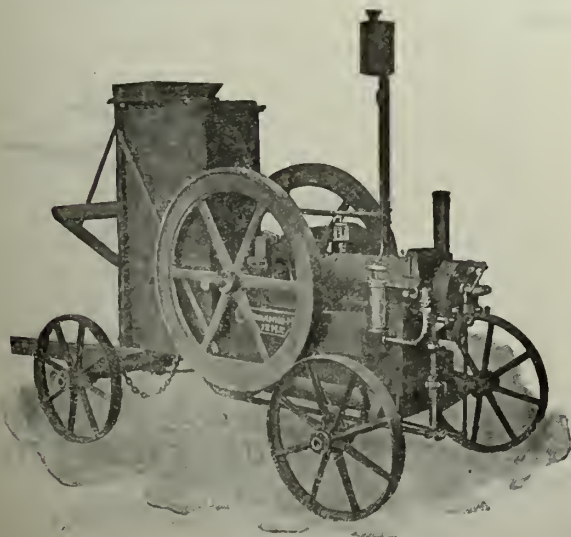
## GASOLINE ENGINES

THEY ARE USED TO OPERATE  
PUMPS, CHURNS, FRUIT GRADERS,  
WOOD SAWS,  
SEED CLEANERS, BONE GRINDERS,  
AND OTHER DUTIES.

FOR FULL PARTICULARS, ADDRESS

## FAIRBANKS, MORSE & CO.,

310 Market St., SAN FRANCISCO. 136-138 Los Angeles St., LOS ANGELES. First and Stark Sts., PORTLAND.





# JOHN DEERE PLOWS ARE ALL RIGHT.

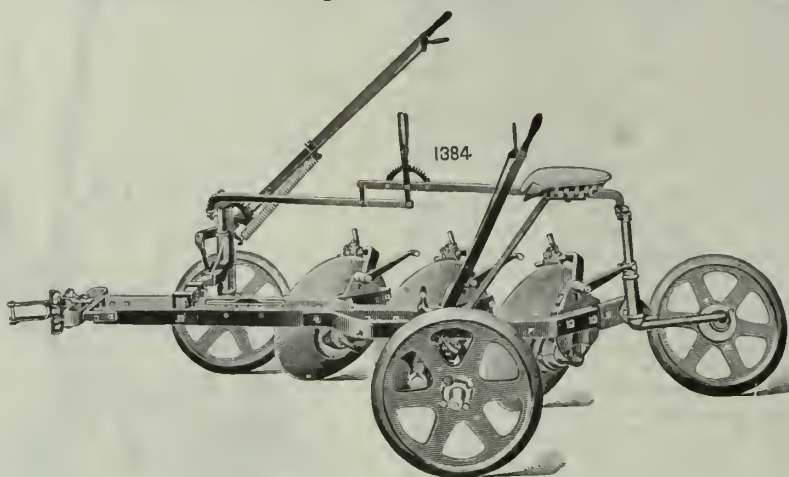
The Largest Line of Plows. Built in the Largest Plow Factory in the World. Buy the Best and Take No Other.

THE ONLY PRACTICAL AND SUCCESSFUL DISC PLOW ON THE MARKET.

SIMPLE, SYMMETRICAL AND SUBSTANTIAL.

UNRIVALED IN EASE OF OPERATION AND QUALITY OF WORK.

EMBODYING THE CORRECT APPLICATION OF CORRECT PRINCIPLES.



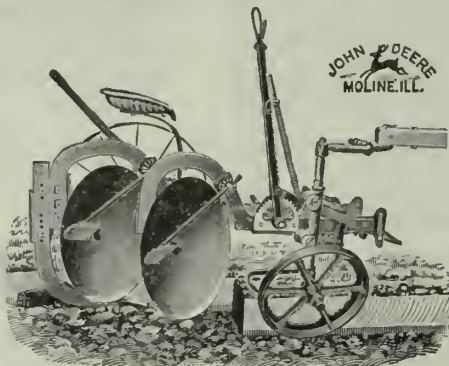
DEERE DISC PLOWS. Single, Double, Triple and Quadruple.

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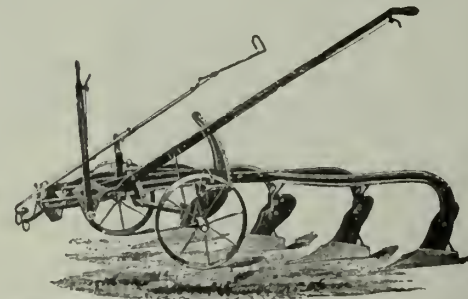
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Steering Device (Patented).  
Light Draft.  
Perfect Pulverization of the Soil.  
Ability to Clear Itself in Trash.  
Dust Proof Bearings.  
Ball Bearing Discs.  
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HAND PLOWS OF ALL STYLES AND FOR ALL KINDS OF WORK. STEEL AND CHILLED, WITH WOOD AND STEEL BEAMS. LARGEST STOCK IN THE COUNTRY.



SECRETARY DISC PLOW. Single and Double.



NEW DEAL PLOW. Single and 2-3 4-5 Gang.  
MORE "NEW DEAL" PLOWS SOLD THAN ANY OTHER, BECAUSE IT IS THE BEST.

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(BRANCH OF DEERE & CO., MOLINE, ILL.)

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Hooker & Co.  
16-18 DRUMM ST.  
SAN FRANCISCO.



CANTON SINGLE FURROW WHEEL PLOW.

Hooker & Co.  
16-18 DRUMM ST.  
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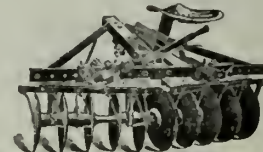


CANTON DOUBLE DISC PLOW.

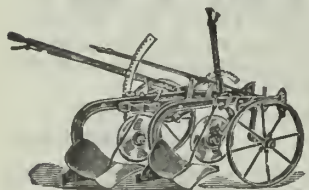


KENTUCKY DISC DRILLS.  
8-10-12 Foot.

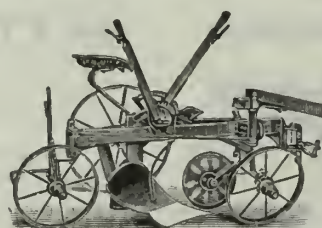
Hooker & Co.  
16-18 DRUMM ST.  
SAN FRANCISCO.



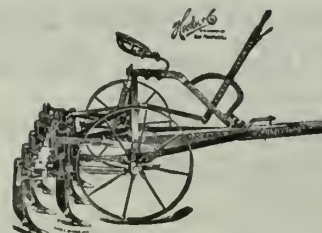
PACIFIC REVERSIBLE DISC HARROWS.  
4-5-6 Foot.



CANTON CLIPPER GANG, TWO FURROW.



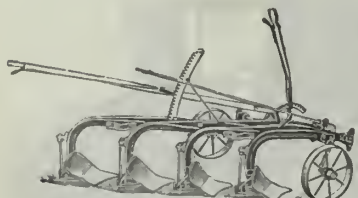
CANTON CLIPPER TRICYCLE SULKY.



CANTON NEW MODEL ORCHARD CULTIVATOR.



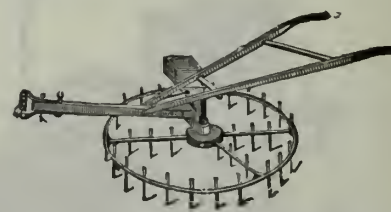
PACIFIC REVERSIBLE DISC HARROW



CANTON FOUR FURROW GANG.



CANTON "U" BAR LEVER HARROWS.  
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 16.

SAN FRANCISCO. SATURDAY, OCTOBER 19, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Three Splendid Plants.

Out of the multitude of plants which are proving of splendid adaptability to California conditions, it is hard to select for particular reference, and yet probably no plant lover will be offended at the distinction which we award to the three which are shown on this page. They are certainly rendering notable service in the adornment of our suburban places and are approved by the popular vote. They are chosen by the Cox Seed Co. of this city for illustration in their new fall catalogue, and that is pretty good indication that the plants have both popularity and merit. An enterprising firm must not only attract attention, but must permanently please people, and

popularity is the Japan ivy (*Ampelopsis veitchii*). We share the enjoyment of this plant with the whole country, for it first came into wide notice through its success in Boston, but it is none the less beautiful here where a climber is needed which will cling closely and preserve the main outlines of the surface which it covers. The picture on this page shows a corner of the library building at the University of California. The plant extends its growth a story higher than the picture shows. The vine requires no trimming. It presents an even surface of bright green, changing to dark green and to various shades of red as the autumn advances, and drops its leaves in winter that the sun may warm and dry the walls during the rainy season. We are not sure how well

this plant will endure interior heat, and would be glad to have observations on that point. It seems to us that the plant will endure the hottest sun of the coast region on brick or stone walls, but we have seen it burned on board walls and fences. This may limit its availability for frame buildings.

Of the White wistaria too much can hardly be said. The grace and beauty of the summer growth of foliage and the profusion of its snowy bloom during the California winter are both points of high value. Though

we have fine specimen plants here and there, as the picture shows, the wistaria is not as widely grown as it should be. We should have more arbors and pergolas upon which it can disport itself and more unsightly fences should be covered with it.

MR. W. A. TAYLOR, pomologist of the Department



The White Wistaria in Full Bloom.

of Agriculture, writes that the Secretary of Agriculture, under provision made by the last Congress, will undertake, in co-operation with the State experiment stations and individual fruit growers, dealers and cold storage men, certain lines of experiment, with a view to determining as accurately as possible the underlying principles that govern the successful storing and handling of fruits in transit. These experiments will at first chiefly determine the requirements in the handling of fruits intended for cold storage. They will include tests of the relative adaptability of the important varieties of apples and pears to cold storage, the effect of picking at different stages of maturity, different methods of handling and packing, as well as of the size and style of package, the effect of different temperatures in storage upon different groups and varieties, and other important points in relation to cold storage that have not been accurately worked out as yet. Methods of handling fruit in transit, both for domestic and export trade, will also be considered, and throughout the entire work, the effort will be made to extend the distribution and sale of American fruits.



Japan Ivy on the University Library at Berkeley.

we think Cox makes no mistake in giving prominence to these three plants.

Most notable is the Canary Island date palm, of which a very life-like picture is given on this page. It is our most splendid hardy palm and the planting of it has been so widespread during the last few years that it bids fair to displace the native fan palm as the most prevalent palm in the State. It is strikingly superior to our fan palm in grace and beauty, and is, so far as our observation goes, quite as hardy and can be as readily grown from the seed. It thus becomes available for the widest planting and none need miss its possession on the ground of cost. It should be planted widely over our valleys and foothills, for its graceful head of foliage and its rhythmically swaying leaves are fitting and beautiful in almost all situations. We have had a long experience with this plant and have great love for it. On our home ground in Berkeley we have a plant which was transplanted from a pot in 1880. It now agrees quite fully in form and general aspect with the plant shown in the engraving. It has a spread of foliage about 25 feet in diameter and is about 30 feet in height. Its beauty attracts the attention of passers-by and rewards them for the study they make of its symmetry and beautiful arrangement of leaves. It is a staminate plant and is notably different in robustness and density of crown, from the pistillate, the latter being a more open and smaller plant—more airy and light and perhaps to some tastes more graceful. For ornamental purposes the Canary Island plant is greatly superior to the fruit-bearing date, which has a more bristling and bustling aspect as a plant should which is charged with such important business. The Canary palm is simply beautiful, and acts as though it were aware of the fact.

Another plant which is constantly gaining in popu-



California's Best Hardy Palm—*Phoenix Canariensis*.



# PACIFIC RURAL PRESS.

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E. J. WICKSON..... Horticultural Editor.

San Francisco, October 19, 1901.

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## The Week.

Active people have already passed over into the work of another year and are plowing and sowing for next year's grain crop wherever such early work is advisable. This, connected with the hauling of this year's crop and late fruit handling, causes much bustle in the country and some stir in the city and town trade in implements and supplies. In these inspiring pursuits people are happily forgetting the troubles of the summer and trusting to the future to compensate for the deprivations and losses of the profitless issue which some agitators precipitated. Probably all are now convinced that activity is after all the greatest earthly blessing of mankind. Certainly things are now spinning ahead finely and foundations of a year of exceptional prosperity are being laid.

Look, for instance, at the course of the wheat trade. Six cargoes, aggregating over 20,000 tons, have cleared this week, not to speak of 500 tons by steamer to South America and 2000 barrels of flour for Asia. Three ships cleared in one day. Freight rates are a shade easier, for plenty of ships are available and ship owners are becoming more inclined to load on their own account. Under these conditions there is a better tone to the market and something to offset the effect of the current reports that the world has, after all, more wheat in sight than has been calculated. Barley is steady and unchanged; 1600 tons have gone out by ship. Oats are unchanged, as there is enough Government buying to hold things steady. Corn and rye are also stationary, and some buckwheat is going at \$1.50. The movement of mustard is rather free, 1103 cents to New York and 1266 cents to Antwerp this week. Beans are coming in plentifully and most kinds are lower; 8000 sacks have gone to New York. There is a surfeit of wrinkled peas, while Niles peas are in fair demand. Bran is easy, but no accumulation has yet occurred. Hay is doing pretty well, being firm and in good demand for choice. Hay barns and warehouses are still being stocked up for winter use and trade; some hay is also going by ship to Mexico. Beef and mutton are in fair demand, but supplies are ample. Hogs are easy but not lower; packers are cutting them up at a lively rate, for arrivals are free and Eastern hogs are expected before very long. Fancy butter is high; but below that there is weakness, making what they call a top-heavy market, though quotations are unchanged. Cheese is firm, especially new cheese. Eggs are high for fancy, but they must be strictly gilt-edged to reach top prices.

Poultry is still low, but supplies are clearing out better. Large broilers are in particular demand. Potatoes are still dragging, as Colorado is enjoying the Eastern demand with 25 cents per cental less freight to the distant markets. Onions are steady and quiet, though fairly active. There is no special change in apples. Table grapes and peaches are higher, but wine grapes are sometimes going for less, as there is much of low grade being offered. Dried fruits are unchanged and slow. The uncertainty in prunes and raisins causes a waiting trade and offsets the whole line of dried fruits somewhat. More new oranges of the "intermediate" crop are offering. Good Valencias are selling fairly. Lemons are in slightly better tone, but the demand calls for the best only. Almonds and walnuts are quiet; little is doing in the former, while there are some offerings of the latter a little below Association price. Honey is steady; offerings are not heavy but are ample; about 1000 cases have gone out by sea recently. Hops are slow; dealers talk high, but do not buy, causing one to suspect that they are talking up to sell what they have already. Wool is quiet; scourers are busy with previous purchases, but there is no weakness in desirable wools.

Referring to the world's wheat supply, it may be added that the Department of Agriculture announces that the three most important estimates of the world's wheat crop of 1901 so far made agree that the crop is larger than that of either of the two preceding years. The estimates follow: Hungarian Ministry of Agriculture, 2,671,360,000 bushels of sixty pounds; Beerbohm Corn List of London, 2,711,600,000 bushels of sixty pounds, and Bulletin des Halles of Paris, 2,790,810,000 Winchester bushels. The official Hungarian estimate says the crop exceeds last year's by 209,881,000 bushels of sixty pounds, or by 212,430,000 Winchester bushels. Other reports are that though there are short crops abroad the United States has an unusually large one. The United States in years of shortage in its yield exports about 135,000,000 bushels, and in years of full crop the exports rise to 213,000,000. This year it is estimated that there will be a demand for fully 300,000,000 from the United States. The income from this source will enable Uncle Sam to paint his back fence on the Philippines sky blue if he wishes and put a gold stripe on it too.

The affairs of the Prune Association have undergone some changes. After quite free discussions between the Association directors and those who have been trying to place the Association in the hands of receivers, the latter have decided to hold their movement in abeyance for the present and allow the Association to proceed with sale of the holdover prunes which are in their hands. It is claimed that the canvass of the dissolution committee showed that over 90% of the members desired to close up the affairs of the Association, and over 80% have signed the petition therefor. However encouraging this may seem to the revolutionists, they think it wise to hold aggressive action in abeyance for the time being and await developments of the present manifestations of more active policy of the Association's management, thus giving it uninterrupted opportunity to produce the promised results from the conditions and present activity. The committee, however, advises the Association directors in making announcements of policy, conduct of business or business relations with other persons or corporations, to the public or to the members as a whole, that all such announcements be supported by the records and business books of the office in order that the public may receive accurate information and escape acrimonious disputation. This is, on the whole, a very wise conclusion and shows both business sense and a good disposition. It will make organization next year much easier.

The Raisin Association has practically lapsed for the year. The recent growers' meeting appointed a committee which, after studying the proposition two days and nights, reported that it is impracticable to handle this year's crop under the corporation, and all leases should be returned to the signers; that the price of raisins named by the Association on this year's crop was lower than the market justified; that owing to the thoroughly demoralized condition

of the market and the lateness of the season, each grower should be allowed to market his crop in any manner he may choose. A new organization, called the Raisin Exchange, to prevent cutting of prices, has already been formed of growers who have made contract with packers. The exchange claims to control 35% of the crop. Prices for raisins have been offered by the exchange that average a cent a pound higher than the figures announced by the old association. In the raisin situation, as well as in the prune, there should be a chance for better organization before another crop is gathered.

## Credit to Locality in Productions.

We have been trying to secure some little more definite recognition of the parts of California which produce certain crops, so that the distant reader of official documents would not get northern and central California crops south of Tehachapi and southern California crops scattered all along up the coast to Portland. There was issued the other day by the Division of Statistics of the United States Department of Agriculture a very interesting pamphlet entitled "Rates of Charge for Transporting Garden Truck." We found on examination of it that California fruits were included in the so-called truck, but so localized that the wayfaring man, though a sage, would certainly err in conclusions as to where it came from. We wrote to the chief of the division, Mr. Hyde, pointing out the fact that his table headed "Carload Freight Rates on Deciduous Fruit from Southern California," etc., would be liable to excite some warm discussion in this State because there is no deciduous fruit shipped from southern California, either to the Mississippi valley or the Eastern States. We assured him that all the shipments of such fruit are from the central and northern parts of this State, and all trains go north from Sacramento. In another table rates are given on citrus fruits from California and Oregon, and we advised Mr. Hyde that it would have been nearer correct to say freight rates on oranges and lemons from southern California, because nine-tenths of all the citrus fruits shipped from California come from southern California, although they may go East by way of San Francisco or Portland; but the idea of making the head line "Oranges and Lemons from California and Oregon," when there is not a citrus fruit grown in Oregon, would strike the local reader as rather ridiculous. We expressed the hope that our objection may suggest some way to make these head lines a little more truly descriptive. We have received the subjoined note from Mr. Hyde:

TO THE EDITOR:—In reply to your letter of the 4th inst., in which adverse criticisms are made concerning certain table headings contained in Bulletin 21, miscellaneous series, published by this Department, and entitled "Rates of Charge for Transporting Garden Truck," permit me to make the following remarks:

The Transcontinental Freight Bureau's tariff No. 3-C, on page 38, gives numerous rates on deciduous fruits from points well within what might be termed the southern California region. Nearly all deciduous fruits are named, and carload rates are given, which would seem to indicate that large shipments were made throughout the region. For this reason it was thought that the heading prepared for table No. 75 in the bulletin referred to was the one best fitted to describe a common point from which the rates contained in said table were based.

In table No. 74 the rates contained therein are again taken directly from a published tariff, and as points in California and Oregon take a common rate for shipment of fruit Eastward, the heading of the table was made so as to cover all points from which the rates applied, and it was, therefore, not meant to imply that the fruits shipped from these points were necessarily grown in the immediate vicinity.

The prime object for which the tables in Bulletin 21 were prepared was to demonstrate the economic relation between different sections of the country, so far as the charges which are enacted for the transportation of different perishable agricultural products are concerned.

JOHN HYDE.

Division of Statistics, U. S. Dept. Agriculture, Washington, Oct. 10.

We presume it is too much to expect people with wide range of view to note the local distinctions which seem to us important to the end that distant readers may understand the variety which characterizes the Pacific Coast States. Mr. Hyde says that the rates on deciduous fruits are given from "points well within what might be termed southern California." That is to say that distant people draw a line through about in the latitude of San Francisco and make all above it northern California and all below it southern California. San Jose is then away off in southern



California and her deciduous fruit shipments are credited to such division of the State. Our distant friends should know that such division of the State has no local standing whatever. Southern California by common consent, and by compactness and similarity of products, is composed of the seven counties south of the Tehachapi and Santa Lucia mountains, and to quote overland deciduous fruit shipments to that area, which makes none, is of course productive of much confusion.

What Mr. Hyde says about rates on citrus fruits from California and Oregon is, of course, technically correct and from a railroad point of view could hardly be otherwise expressed, but when it comes to a pamphlet which can just as well as not indicate closely the producing regions, it is not quite so defensible. The fact that the rates are the same all the way from Portland to Los Angeles on oranges, if that is the case, could be easily given in a footnote, but the main line should, we think inconvertibly, be made to show that it is a California product which is being set forth. The common reader cannot rise to the conception that rates are given without implying that the fruits shipped are grown near the points named, hence we would try to localize the product accurately as far as possible in all such publications.

QUERIES AND REPLIES.

Seedless Raisins and Resistant Roots.

TO THE EDITOR:—I have received a great deal of valuable knowledge from your paper, and it is in quest of more information that I ask these questions. I have some land in Fresno county, near Reedley, that is a little sandy, but raises fine crops of grain without irrigation. The water supply is abundant, but the water level is about 20 feet, as it is on a bluff next to the river. Which variety of seedless raisins would you plant, Thompson Seedless or Seedless Sultanas? The dreaded phylloxera has made its appearance within 20 miles, so what resistant variety would you advise planting? Where could I find such vines already grafted? If you do not know where I could get them grafted, where could I get the resistant scions and at what cost?—G. E. R., Hanford.

As we understand it, the Thompson's Seedless has now a clear right of way over the Sultana. We are not sure that you can expect a satisfactory crop of raisin grapes on a bluff with water 20 feet below and no irrigation, and yet there may be conditions which would carry the vine. The success of grain without irrigation is, however, not full evidence that fruits will find enough moisture. The grain makes its growth in the rainy season; the grape must sustain good foliage all summer. As for resistant stocks for your region, the matter is still to be determined by local trial. Presumably the Rupestris St. George would be best for such a situation as you describe, though there will almost surely be found moister lands below where some other stock will be better. We cannot discuss dealers in vines and their prices. If you will watch our advertising columns, as all readers should, you will find announcements of resistant vines as the season advances and write to the advertisers about the things they offer. Our advertising columns contain much important information.

Trifles Light as Air.

TO THE EDITOR:—I send specimen of something that was floating in the air in quite a large amount. The pieces varied in size from 1/2 inch in width and 3 inches long to 7 or 8 inches wide (irregular) to 6 or 7 feet long, and varied in height from 50 to several hundred feet. Some of it was so high that it could only be seen with the aid of a field glass. The one this specimen came from was the lowest and smallest of any we saw, and I followed and picked it up when it struck the hill. It seems to be a very fine and strong white fiber. Is there any plant growing in California that produces such a fiber? If so, a little whirlwind may have taken the fiber into the sky, and its extreme lightness enables it to float a long distance. It all passed over in the space of half an hour.—SUBSCRIBER, Los Gatos.

The material you send has been carefully examined by Mr. Davy of the Department of Botany of the University, and he finds it wholly devoid of vegetable structure, which would indicate that it is probably spider web which has been taken up by the wind, sent on its flight and then sifted down upon your region through the still air. It is impossible to tell whence it came. It might have come from some region of trees or shrubs, or possibly even from lower vegeta-

tion. It might have been beaten down by the recent rains and then after drying taken up on the wings of the wind. At first sight our impression was that it was of algaous nature, for not long ago quite a flight of whitish material, resembling this in some respects, was reported, the specimens showing the characteristic vegetable structure of an alga, but this specimen is not so. As already stated, it seems to be of different origin and probably consists of dismembered insect webs.

Grafting on Prune Stock.

TO THE EDITOR:—I have some prune trees on peach root and I want to work them over to something else. Could I graft almonds on them and make a good tree, or how would peaches do? Can Royal apricots be grafted on to prune trees or myrobalan root, and make a good tree? When does the Sugar prune ripen? Will they hang on the tree, without any damage to them, until the Muir and Lovell peaches are disposed of?—SUBSCRIBER, Winters.

The almond takes well on the prune but may overgrow somewhat, as the almond is the freer grower. Peaches do not do so well as almonds on prune stock, and apricots are about in the same category. Though the plum root is freely used for the apricot in Europe, it is less favorably regarded in this State because of dwarfing tendency in most soils. The Sugar prune will work well on your prune stocks. It ripens about one month ahead of the French prune. We do not know just how they will act in the Muir and Lovell season: some reader who has all these fruits can help up with this observation.

Apricot on Plum.

TO THE EDITOR:—I have an orchard on the Feather river, near Marysville, in a part of which is planted some 300 apricot and 800 Purple Duane plum trees, all of which are some six or eight years old. The apricot bears well and produces good fruit, the 300 trees producing this season nearly ten tons of good fruit. The Purple Duane plum trees produce absolutely no fruit at all. During the past three years I have not had twenty-five crates from the entire plum orchard. Both kinds of trees are growing on exactly the same kind of soil, the advantage, if any, being in favor of the plums: Query: If I graft apricots on to the plum trees, will it form a union that is durable and lasting? In other words, is there an affinity between the two woods, that when the tree becomes an apricot it will stand up under the growth of wood and weight of crop? Also, would you recommend the grafting of the Tilton apricot on to these plum trees? I note that the Tilton does well in the San Joaquin valley, and climatic conditions are somewhat similar.—E. F. WOODWARD, Santa Rosa.

The apricot will take on the plum and make a good union. As previously stated, there is sometimes a dwarfing of the tree by the plum stock; but, with a free grower like the Duane, and such rich, deep soil as you have on Feather river, you ought to get large enough trees. If you do the grafting, be careful at first not to let your grafts make too large extension nor carry too much fruit for the first year or two. Let the union get strong before testing it too severely. The Tilton apricot is a very promising variety and is certainly worth trying. It has many good points.

Bokhara Clover.

TO THE EDITOR:—Kindly let us know through the columns of your valuable paper the name of the forage plant which I enclose. It grows very prolifically on dry land, and it is wonderful how quickly it will grow up after being eaten off all summer without a particle of water.—SUBSCRIBER, Arlington Station, Riverside.

The plant is Melilotus alba—called white melilot, Bokhara clover or sweet clover, etc. It will grow readily in dry land, but few animals like it and usually keep away from it unless short of other feed. This plant is a pest in alfalfa fields, into which it has gained too wide access through foul alfalfa seed. It is also a nuisance in wheat fields because its powerful odor permeates the grain and taints the flour. It is, however, a sister plant to the yellow melilot, which is worse in this regard. The plant seems to be more useful for bees than for any other kinds of live stock, and some Eastern bee writers get cross when we tell them that the melilots are of more harm than good.

Bermuda Grass.

TO THE EDITOR:—Is Bermuda grass safe to use as a lawn grass in a mountain pasture, or is its spreading nature such as to make it a dangerous variety? —J. P. WARD, Morgan Hill.  
It is almost impossible to keep Bermuda grass

from spreading, though some have done fairly by using 12-inch boards for borders, burying about 10 inches of their width in the soil. It seems to have some respect for a corral of this kind. On dry lands Bermuda makes little growth and cannot count much for pasturage. On moist lands where there is no danger of escaping it grows well. On the whole we should not use Bermuda where better grasses can be made to grow. It stands a good deal of alkali and is more thought of by stock men handling alkali soils than by any other California farmers.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending October 14, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

The weather has been exceedingly warm and dry during the week, the temperature averaging several degrees above normal. Northerly winds have prevailed, but have caused no damage. The conditions have been very favorable for late grapes and fruit drying. Orchardists have commenced pruning. Oranges and olives are in good condition and will mature earlier than last year. Grain and hay are now moving rapidly to market and storage. Plowing is progressing and many farmers are seeding summer-fallowed land. Green feed has made a good start since the rains.

COAST AND BAY SECTIONS.

Abnormally high temperatures have prevailed in most sections, accompanied by light northerly winds. At Healdsburg the maximum temperature Saturday was 102°. Late grapes, drying fruits and vegetables have been greatly benefited by the warm weather. The second crop of wine grapes will be late in maturing and will be below average. The apple crop is reported heavy in most places. Citrus fruits continue in excellent condition. Corn is maturing and will be a fair crop. Potatoes are below average. Bean harvest is progressing rapidly. Heavy shipments of grain are being made by steamers and rail. Threshing is nearly completed. There is a large quantity of hay still unbaled in San Benito county. Cattle are in good condition. Forest fires are causing considerable damage in some sections.

SAN JOAQUIN VALLEY.

Clear weather prevailed during the week, moderately cool during the first part and quite warm the latter. Conditions during the latter part of the week were most favorable for fruit drying and raisin making, and good progress was made toward securing the crop. Large shipments of grapes are being made to the wineries, and harvest of table grapes is progressing rapidly. Some prunes are still on the trays. Dried figs are being shipped. Egyptian corn is being cut. Hay is being rapidly put under shelter. Grain is being held in warehouses. Large shipments of sweet potatoes are being made. Stock of all kinds are in excellent condition and there is plenty of water in the ditches. Plowing and seeding are progressing in some localities, but generally farmers are waiting for more rain. Some of the first sown wheat is coming up rapidly.

SOUTHERN CALIFORNIA.

Generally clear weather has prevailed during the week, with heavy fogs along the coast nights and mornings. Conditions have been favorable for raisin making and late crops. The tomato crop is heavy and of good quality. Citrus fruits continue in good condition. Walnut picking is progressing. Bean harvest has commenced in Ventura county and the crop is reported much better than expected. The corn crop is about average. Late grain threshing is progressing in the extreme south.

EUREKA SUMMARY.—The weather continues favorable for crops and farm work. New grass is 2 inches high. Volunteer oats are doing well. Harvesting of potatoes has begun. Fall plowing is making good progress.

LOS ANGELES SUMMARY.—Warmer week, with some drying north wind in the interior. Heavy fogs along the coast benefited vegetables, but retarded bean threshing and raisin drying. Oranges are cracking some.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, October 16, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week.....	Minimum Temperature for the Week.....
Eureka.....	.00	4.29	2.85	3.60	78	48
Red Bluff.....	.00	1.93	2.09	1.41	94	56
Sacramento.....	.00	.58	.68	.90	92	50
San Francisco.....	.00	.32	1.14	.97	92	50
Fresno.....	.00	.57	.43	.63	94	50
Independence.....	.00	.77	.84	.46	82	50
San Luis Obispo.....	.00	.38	1.31	1.20	96	46
Los Angeles.....	.00	.12	.25	.49	82	46
San Diego.....	.00	.06	.10	.32	78	54
Yuma.....	.00	.32	.02	.85	98	54



## TRACK AND FARM.

### Another Plea for the American Standard Horse.

Written by the PACIFIC RURAL PRESS by FIDELIO.

\* \* \* Wherever the trotting horse goes, he carries in his train brisk omnibuses, lively bakers' carts (and, therefore hot rolls), the jolly butcher's wagon, the cheerful gig, the wholesome afternoon drive with wife and child, all the forms of moral excellence—except truth, which does not agree with any kind of horse-flesh. The racer brings with him gambling, cursing, swearing, drinking, the eating of oysters, and a distaste for the mobcaps and the middle-aged virtues.

OLIVER WENDELL HOLMES.

Thus prophetically did the "Autocrat of the Breakfast Table" sound the praise of a class of horses that our nation can well be proud of at the present time.

With the above quotation I beg to present to all interested in agricultural pursuits, and especially in breeding horses, a plea for so typical an animal as the American standard horse.

The writer of this spent many years on a farm, has bred, raised and worked horses, and has also had some trotters trained on the track, and thinks he has the "observant eye" for the equine form because he loves it so.

The phenomenal speed contests between the trotters Cresceus (2:02½) and The Abbot (2:03½) brought out two articles in the PACIFIC RURAL PRESS on September 7 and 14 which seem rather a little misleading, inasmuch as they show an undeserved partiality for the thoroughbred and a small opinion of the standard bred horse.

For the benefit, therefore, of the breeder on the farm rather than on the track, and as one who believes that true beauty should always be found closely associated with utility, and, furthermore, without any apology to the champions of the thoroughbred or runner, I feel called upon to unburden my views concerning the standing of our American trotter.

The articles make it appear as if this American product—the trotter—is quite outside the concern of the farmer, and the view seems to be taken that all laudable efforts to establish this home-made product of American soil and ingenuity as a valuable fixture in the nation's life really tend to nothing except when use is made of the thoroughbred blood. The impression there is gained that the standard horse—that is, the progeny of horses which have shown their ability to trot a mile in 2:30 or less—is to be relegated to the race course or trotting track. A more extended investigation beyond the performances on the track will show this to be somewhat of a prejudice. A closer study of the coach horse, the buggy horse and the delivery horse will prove that through all these years the American Trotting Register has rigidly upheld the so-called standard, and the breeders have abided by that rule. The American standard horse, whether trotter or pacer, has found appreciation everywhere and has grown in value and scope for some specific purpose outside of the track.

**UTILITY.**—In breeding horses the farmer's watchword must necessarily be utility. The horse he raises must not cause too much trouble. He must have a strong constitution, and in his manner of service he must show intelligence. Usefulness, therefore, means that the horse should not merely do much work, but should perform it with intelligence.

In speaking of the Percheron horse, such a good French authority as C. du Hays says:

"For it must not be forgotten that work requires intelligent horses; the more they are gifted with this quality the longer they last and the more useful their services."

This docility it is that makes the Percheron and the Norman so famous the world over. Every one who has handled them, or even the half and quarter bred ones, knows what little difficulty they cause. They pay their way, almost, since their conduct is originally the result of work, feed and kindness. Like their prototype, the Arab of the desert, the Percheron has been a member of his master's household. The close contact with man has moulded his mind.

**THE AMERICAN HORSE.**—Like that district in France where these wonderful horses come from, so can we look back upon the early colonies as the birthplace of our standard horse. Over a hundred years ago the necessity of cross-country travel determined the existence of the American trotter and pacer. Long before their speed capacity was developed they had acquired the aptitude to trot and pace under weight pulling.

We may fairly say that this stock whence the standard horse springs is now indigenous to this country. As du Hays says again of the Percheron, we can likewise maintain: "The horse is as much, and more, the son of the soil upon which he is foaled and reared as he is of his sire and dam."

The levelheadedness of the American people has brought out the characteristics for which our trotting stock is justly famous.

**THE TROTTING GAIT.**—In those early days it was known, as it is to-day, that the trotting gait causes the least wear in the horse when speed and power of draft had to be combined. This was recently illustrated in San Francisco, when by an order of the fire

department all calls to fires are to be trotted and not run, showing, as every horseman knows, the economy of power, the safety of the horse, and the efficiency of speed and draft which lie in that gait.

The fair-minded must admit that the tests of that gait as we see them to-day all over our country are the legitimate way not only to perpetuate mere speed, but also to develop still more the great moral qualities of the standard horse.

**SIZE AND WEIGHT.**—Elsewhere, some years ago, I wrote against the abuse of the so-called standard rule breeding. There was good cause for complaint in the results of indiscriminate breeding for speed only. But since then breeders and trainers have found it to their advantage to take into consideration in breeding horses the two most necessary requirements of size and weight. And more than that, for that horse is considered the most useful which can trot without any boots, or else with very few.

In the matter of size and weight, however, the standard rule is deficient. It classifies by speed only, whereas it should take into account the two important factors of usefulness—size and weight.

**TEMPERAMENT.**—What guidance the registration of the standard horse has given to the development of a certain type of horse is mainly remarkable by the exclusion of the thoroughbred blood. There was a reason for this, for the men who wished to preserve and develop the equable temperament, and consequent levelheadedness, of the standard horse could not admit the irritability of the runner without impairing the usefulness of their charge. In short, the standard as adopted tended to bring out through the test the moral qualities of the animal.

I lay great stress on the moral evolution of the American trotting stock, for without courage, without will power, without gentle manners, without fidelity to his master, without self-esteem (so often called pride), without patience in service and without a high intelligence, his present requirements of size and weight prominence on the track could never have been attained.

**SPEED CONTESTS.**—And I claim that these essential qualities, so important in the life of a horse, are mainly the handiwork of our American trainer. Under his care, and at those very contests which are often considered mere sport, the American standard horse has received his life education. It is but rational and politic for the owner that horses should publicly prove their strength and endurance and show that they are entitled to be progenitors of an equally robust race; and it has always seemed strange to me that farmers do not show their heavy stallions and mares in some draft contests, or at a fast walk, just to make good their assertion that such and such a horse is a good one.

**POINTS OF VALUE IN THE STANDARD HORSE.**—For more than three generations of intelligent men the treatment of the trotter has been more and more on lines of usefulness. Barring the heaviest kind of work, we have among the representatives of the true standard horse satisfactory material for nearly all purposes in the country as well as in the city, on the farm as well as on the track. Whether the vehicle be the carriage, buggy, spring wagon, delivery wagon or the implements of the field and orchard, we have ample evidence that this American standard horse "fills the bill," because he is mentally and morally equipped for any kind of work that requires prompt execution.

In reporting some sales in New York, The Spirit of the West remarks:

"The American standard bred trotter to-day outsells, outshows and outranks any other breed or type of horse on the face of the world. He is a pleasure horse as well as a utility horse, and he has behind him a heritage of breeding that surpasses all others. There is no other country that can produce a horse that can compete with the American trotter as a coach horse."

**DANGER IN CROSSING.**—In view, then, of the building up of this more and more useful type of horse, any fresh infusion of thoroughbred blood tends to destroy or at least divert the development of that type, because it jeopardizes and even sacrifices those typical moral qualities for mere speed. This departure in breeding is dangerous ground for the average breeder. It is the pastime of rich men. It is doubtful, too, if the results warrant the experiment even for speed alone. On the track more than mere speed is required to make a good trotter or pacer.

There is a great difference between the mental machinery of a horse running at top speed to win and that of one which has to control his gait and must not leave his feet to beat his competitors.

**THE ABBOT AND CRESCUS.**—I for one am glad that The Abbot is a gelding and Cresceus a stallion. The Abbot has more speed, they say, but Cresceus is, as a Mexican would say, "mucho mas caballo"—much more of a horse—principally because he sticks to his resolute gait through all the excitement of a race, which The Abbot does not always do; and also because he shows more compact strength. If we look at the contour of The Abbot we there find range, style and the finish that betrays the ancestral "full blood." He is built on the lean and nervous order. He is beautiful in a way, but lacks substance. But if we turn to Cresceus we notice a chunky horse of great muscular power. He looks plain, business like,

determined. His neck is short and not as aristocratic as The Abbot's, but his straight forehead and square nose, with its wide nostrils, and the strong jaw tell of his sense, his ease of breathing and his will power. While The Abbot carries his long neck propped up by an overdraw check, the blocky son of Robert McGregor wears an easy side check. He is levelheaded enough to have his own way about carrying his head.

This is what G. H. Ketchum, his owner and driver, says:

"Cresceus seems to possess determination, will power and muscular strength to an unusual degree. I have never seen a trotter muscled the way he is, especially in his hind legs. If one will stand behind him and measure the distance between the point of the hips, and then measure the distance where the breeching goes, he will find that he is about 6 inches wider at the breeching than at the hips, caused by the muscular development of his legs."

After his record of 2:02½ at Cleveland the mayor of Toledo—Samuel M. Jones—wrote him an invitation to come to his native town for an exhibition mile, and said in part:

\* \* \* "It will cheer the hearts of lovers of humanity and horseflesh that the whip had no part in this splendid triumph, and this fact, to my mind, proves that the fellowship between you and the noble animal is of a character that goes to show that there is in the horse a touch of the human and in the man a touch of the divine. This record breaking performance demonstrates that Cresceus responds to the Golden Rule of love."

To which G. H. Ketchum replied in part as follows:

\* \* \* "In all my experience with horses, leaving alone his great flight of speed, I never saw one that possessed the intelligence that he does, and he tries to respond in every way to the wishes of his driver. But it does not need the example shown me by Cresceus to know that by the use of kindness and judgment more can be obtained from our dumb friends than by brute force. There is a whole sermon in the way we treat him to obtain the best results."

But let me add that in one heat at Boston recently Cresceus felt the whip for the first time this season, and resented it; for, when his master went into the stall after the race to pet him, as usual, he made a grab at him with his teeth and ripped off a sleeve of the driver's jacket. It was plain that he meant to say by that, "I was doing the best I could, and what did you hit me with that whip for, — you?"

**A REPRESENTATIVE.**—Cresceus is fairly representative of the standard bred horse, pre-eminently so in speed at the trot, but also as an individual of great strength, endurance and intelligence. He stands 15:2½ hands and weighs now 1075 pounds, and probably 1125 when out of training, while The Abbot stands 15:1½ hands and probably weighs 1000 pounds. Of the two, an impartial judge would designate Cresceus as the more serviceable, and, being a stallion, as the sire of strong and useful horses. He comes near to the ideal of a horse that has high moral united to high physical qualities.

**FARMERS AND TROTTERS.**—It is not my purpose to encourage farmers to raise trotters in the hope of breeding a record beater, but merely to call attention to the fact that we have everywhere indications and proofs that the standard horse is a useful horse, one that is best adapted to the conditions of our land. Let the breeders study the situation and unite with the American Trotting Register in building up this standard type, and from the material at hand by judicious selection breed also for size and weight. The small breeders should enlist in that movement, for the man who gives personal care to his brood mare is a most valuable promoter of such a cause. The brood mare, to show great results, must, after all, be "under the hands of the breeder. He works and feeds her well. All the secret of his breeding lies in these few words." My own experience and observation corroborate this.

Instead of breeding from imported coach horses and employing the thoroughbred blood, let the breeders pay more attention to the standard bred horse. It surely has a higher standing than the writer of the Boston Plowman imagines, for it has the support of true horse lovers, who see in it a useful servant rather than a gambling machine like the runner.

As far as speed is concerned, Cresceus has taken the near-thoroughbred-infusion argument off its feet, and as far as high moral qualities in a horse go, I wish to say to such advocates of the "blood" as the writer in the Plowman a few words which are the refrain in a coon song lately rendered at the Orpheum here:

Go w-a-y back and sit down!

San Francisco, Oct. 10.

## THE FIELD.

### Celery Growing in Orange County.

From a paper read by C. F. HEIL before the Farmers' Institute at Santa Ana.

To the culture of celery in Orange county during the last decade is due the transformation of dense tule swamps, the favorite wallows of the wild hogs,



into one of the most famous garden fields of the universe. Before that time, in a small way, the scattered celestial vegetable raisers and peddlers had supplied our tables with an inferior grade of celery. It was not, however, until 1891, when E. A. Curtis, now manager of the vegetable department of the Earl Fruit Co., conceived the advisability of raising the product in a warm climate in the fall and winter to supply the rapidly increasing demand in the Eastern States that the growing of celery in this county was worthy of the rank of an industry.

When D. E. Smeltzer, a few years later, threw himself (for that is just what he actually did) into raising and shipping celery, the attention of all the immediate vicinity was directed to the new industry. In order that some conception of the rapid growth of this business may be gained the number of carloads of celery shipped during the last two years, together with an estimate of this year's crop, is given below:

For the year 1899-1900.....	700
For the year 1900-1901.....	1,100
For the year 1901-1902.....	1,500

Carloads.

**CELERY.**—Celery as a plant is distinctly of swamp growth. While in its various stages of growth much water is needed, yet to know just when to apply this water is one of the most difficult and important matters in its cultivation. The two leading varieties cultivated in this district are the White Plume and the Golden Self-Blanching. The latter also has two species, viz., the Golden Yellow Large Solid and the Dwarf Self-Blanching. Of these the White Plume is the earlier. It matures quicker, but has not the strength to withstand the onslaughts of inclement weather. The Golden Self-Blanching is much the harder. It has more of that rich, nutty flavor. Frosts that kill the White Plume do little more than retard the growth of the Yellow.

**LAND.**—Celery requires the best of land. It must be of such a nature as to retain moisture. The best test is a good crop of celery. But a level piece of land that will raise a first grade crop of corn without irrigation will be very apt to produce a fair celery crop with proper irrigation. And this is the best general rule that I know.

There are, moreover, two general kinds of land set to celery in this county, that is, peat land and rich sediment land. Each has some points in its favor.

Peat soil is the better for raising the plants, and when set to celery gives a more rapid growth. It does not bake. The heavy clay sediment land, however, while it is more difficult to work, produces the better grade of celery. The celery is harder, richer in flavor and withstands frost far better.

**SEED.**—One of the most important and—locally, at least—one of the most difficult features of celery culture is the obtaining of seed that is true to name. Last year through one lot of seed which was very untrue to name there was a loss in this county of fully \$30,000. Again this year some parties desiring Golden Self-Blanching celery seed called for Golden Heart. Now, Golden Heart is nothing more nor less than a variety of Greentop. These parties were sent what they ordered, but not what they wanted.

Some of the local growers have been very successful in raising a fairly pure strain of seed. What this branch of the industry may in time develop into it is impossible to foretell. Certain houses so far have sent out only reliable seed.

I believe that the seed to be used next year should be tested this year. To that end last spring I bought eighty pounds of Golden Self-Blanching celery seed and deposited it in the Commercial Bank. Samples were taken by a number of the growers to test. If this seed proves to be true to name and satisfactory, it is for use in this district. Some such method as this is the only sure means to obtain seed positively known to be true to name. Last year I bought eight pounds of seed imported from France by Musser & Johnson of Los Angeles. One pound of that seed was used by a neighbor and produced plants enough to set thirteen acres—273,000 plants. This coming season they will have quite a quantity of this same strain of seed.

**RAISING THE PLANTS.**—For good results in raising plants the space used as the seed beds must be level, mellow, easy to irrigate, and be reasonably free from alkali. The land should first be laid off as the seed beds are intended. Then thoroughly irrigate bed by bed. This will sprout all the surface weed seeds. When this has taken place thoroughly work the surface of the ground so as to kill all growing weeds, but not so deep as to expose fresh seeds to the surface.

The ground is now ready for the fine seed. This is put in its place either by drilling it in, covering it very lightly with a seed drill, or with a grass seed broadcaster. Three or four pounds of seed is put to the acre. Here begins the long process of irrigation. The seed beds are wet as frequently as two and three times a week. Of course, the weeds grow. They are pulled out and cut off by hand. In about fourteen days the fresh plants begin to show. Where the plants grow too thriftily they must be mowed back.

**TRANSPLANTING.**—Land for this purpose should be plowed deep—12 to 15 inches is none too deep. After the land is plowed for the last time it is ready for irrigation. If the piece be level, little trouble will be

experienced in thoroughly soaking the ground. Water should not be allowed to stand upon the land long enough to sour it.

Since peat land does not bake, it can be set when still very wet. The heavy land, on the other hand, needs to be watched and set when it is good and damp, but not too wet.

A 4-foot disc with a shovel plow attached behind, or some form of a shovel plow without the disc, is used to furrow out for the rows. The plow is followed with a V-shaped smutch, which makes the furrow smooth and pushes the dry earth up on the sides. In this way the trenches are made from 2 to 6 inches deep and 4 feet apart. The plants are set from 5 to 8 inches apart in the rows. This puts about 20,000 plants to the acre. One man on the seed beds to prepare the plants for the planter and another man setting the plants in the rows will together set about a third of an acre a day.

**CULTIVATION.**—Just as soon as the plant has overcome the shock of transplanting and again begins to grow the harrow tooth crowder is started. This implement is V-shaped and stirs and shoves the ground away from the celery.

From now on it is crowd, cultivate, hoe, weed, and again to cultivate, weed, etc., until the celery is ready to bank. This is done by means of another V-shaped tool that collects and pushes the loose earth between the rows up tight against the rows of celery. This earth causes the celery to blanch. This done and the celery is laid by for the year.

**COST.**—I make liberal estimates and upon the basis that only the best is used and that cash is paid for everything:

Rent for an acre of land.....	\$30
20,000 plants at 50 cents per thousand....	10
Setting.....	20
Plowing, cultivating, harvesting.....	25
Total.....	\$75

**PROFIT.**—On the other hand, an acre of good celery cuts out from 1000 to 1500 dozen bunches. Last season the buyers paid from 10 to 18 cents per dozen. You can figure out the grower's profit. The net profit is very variable.

## HORTICULTURE.

### Mr. Roeding's Observations on Olives in Asia Minor.

Mr. George C. Roeding of Fresno, now in Europe, writes as follows in a letter to his brother Fred, who is now in charge of the Fresno enterprises: The picking of green olives is practically unknown in Asia Minor, most of the olives used there being the ripe ones and they are preserved in the same manner we preserved ours—in rock salt. I tasted a few green olives at the home of Mr. Maguissales in Adin, but did not find them particularly good.

**OIL.**—What I wish to dwell upon particularly is the oil production. The acreage in olives in Asia Minor is enormous, and the bulk of the fruit is converted into oil. It is simply out of the question for the olive mills in the various districts to handle all the olives as they are picked, so that instead they are dumped into large vats built of stone in the open air. These vats are about 8 feet wide, 8 to 10 feet long and 8 feet deep.

While in Adin I asked A. H. Dimos, brother-in-law of Mr. Maguissales, a great many questions in regard to this method of storing olives, and he informed me that the olives were always handled in this manner and never spoiled.

From our experience in handling olives I did not think it possible to care for them in the manner they were doing, without causing them to become rotten and worthless. There is no question about the entire practicability of the matter, however, for when I was in Adin in June the mill was working up the last batch of olives from the previous year's crop.

On account of being packed so tightly in the vats, they had lost their form and were simply a jumbled mass of pits and flesh. The odor of this mass was good, however, and there were absolutely no signs of decay or mold. Mr. Dimos must have at least fifty of the vats of the dimensions named at his mill. He makes, on an average, 40,000 to 60,000 gallons of oil annually; in fact when I was there he had over 30,000 gallons in storage tanks.

I tasted quite a number of samples of oil and found it had a fine bouquet, but that it was rather heavy and greasy, though not disagreeably so. I attribute the heavy and greasy condition to the method of handling; in fact, Mr. Dimos informed me if they could press the olives as soon as they were received the oil would have a much lighter color and would not be so heavy.

The principal point to be considered in this matter is that it does away with drying entirely, and furthermore you can take your own time about milling the product—two very important considerations. I will go more into details as to the manner employed in handling the olives, as I would like very much to have you make a similar experiment on a suitable scale, even if you should sell the crop. After a vat is filled they cover it over with a heavy cloth

resembling burlap, but having no lint, and on top of this place boards and then some heavy stones, so that the whole mass shall be firmly pressed down. No precautions are taken to keep out the rain, and Mr. Dimos stated it made no difference whether the rain got in or not.

### Apple Growing at Santa Clara.

H. G. Keesling of Santa Clara gives the Rural New Yorker an entertaining letter which will be suggestive to some of our readers in selecting varieties for use in the home orchard. He says:

"We are feasting on apples this year. Red Astrachan, our earliest variety, came along about July 4th, followed quickly by Yellow Harvest. As there were more of these than we could use, we made some cider, but found it too poor to use. Next to ripen was the Wealthy, about August 1st. The Wealthy is a very acceptable early apple here, always bearing some, and generally a good crop of medium-sized tender juicy apples; besides, I have a soft spot in my organism somewhere for the originator, Peter Gideon, having known him in my boyhood days, and how he found only one good apple out of 10,000 seedlings, and named it Wealthy. Out of my boyhood's earnings I paid \$1 for a Wealthy tree only about a foot high and planted it with great expectations in a choice place in our garden in the suburbs of Minneapolis. The place where it was planted is now covered with buildings, but my expectations are realized here in California. On August 8th I picked one apple from a two-year-old Red Harvest tree in the experimental orchard. It was a better apple than the Yellow Harvest, and will doubtless come earlier when the tree is old enough to bear a crop. On August 9th I picked the first Gravenstein, and we are still eating this most delicious summer apple. While the Gravenstein has the fault of bearing irregular crops of various sized apples, from the size of crab apples up to 4 inches in diameter, its fine quality makes it a very desirable apple for the family orchard. Its thin skin and small core are good recommendations, and I write from practical observation, for to me falls the pleasant task of preparing the apples for table use. The next apple to ripen is the Skinner's Seedling, called by some nurserymen Skinner's Pippin. This apple is now in its prime and is in demand for eating from the hand, cooking, canning or drying. It is very tender and thin-skinned, but has a rather large core. It originated in this county and is named for its originator. The tree is a strong, healthy grower and is one variety that resists the effects of Paris green spray excellently. In my experiment orchard several varieties are bearing enough apples this year to give a test as to quality. Stark has borne two crops, and although large and attractive, the quality is poor. It will probably be one of many to be grafted to some more desirable sort. Arkansas Black and Delaware Red produced a few apples last year and this. They do not promise well, but will have a fair trial.

"We have few worms this year. We sprayed three times, and now have bands around the trunks of the trees, which we examine every week, and destroy the worms found there. We have found that the foliage of some varieties is very tender and easily injured by Paris green—Jonathan and Newtown Pippin showing the most injury in our orchard. The windfalls are picked up every week, the best ones are used for drying and the poorest sent to the hogs. A few weeks ago I passed through the famous apple district near Watsonville, and saw evidences of a large crop of apples. The varieties raised are almost entirely Newtown Pippin and Yellow Bellflower in the proportion of three of the former to one of the latter. These apples are almost all of them shipped to Eastern markets and to London. Prices paid by the buyers range from 80 cents to \$1 per box on the trees for sound apples large enough to pack five tiers in the box. These prices yield handsome profits to the owners of apple orchards."

### How Mr. Compere Secured a Parasite.

Mr. Alexander Crow, according to the Anaheim Gazette, tells how Mr. Compere secured a lot of parasites of the red scale. He was seeking the parasite on the China coast, some two years ago, when he was made aware of its existence by seeing many red scale parasitized. He was loth to go far into the interior on account of the Boxer troubles, but being unable to discover it on the islands, boldly set out for the mainland where the insurrection was then under way.

In a garden of a Chinese mandarin, in one of the interior towns, he came upon an orange tree growing in the front yard. He entered the grounds unbidden and an inspection of the tree revealed the fact that many of the red scale, with which the tree was covered, were parasitized, being punctured by some enemy of its species, which had done its work thoroughly, most of the scale being dead. The microscope revealed the presence of many minute flies, and these Compere could see were at work upon the scale. He must have that tree and its precious contents at all hazards. Here a servant



stepped up to him, and saying his master was not at home, requested Compere to call the next day.

Early the next morning Compere was again at the side of the tree, offering to purchase it from its owner. The latter declined to part with it. The American insisted, offering to pay any price for it. The Chinese finally, after much arguing, consented to dispose of it, and set upon it a price of \$2. Compere paid the price, and the next day the Chinese sent back to him a dollar, saying he did not desire to rob him. Compere refused to accept the money, and sent word back that he would willingly have paid \$20 for the tree.

The tree was carefully boxed and shipped to Mr. Craw at San Francisco. Since then he has been engaged in the work of propagating the parasites with which it was filled. During the past week he has introduced numerous colonies into orchards in southern California.

#### New Outbreaks of the Olive Knot.

The University of California Agricultural Experiment Station has just issued a circular giving warning to olive growers of the discovery of new areas of olive trees seriously affected with the olive knot. Mr. Frederic T. Bioletti, who prepared the earlier University publication on this disease, is also the author of this circular. In 1895 specimens of a serious disease of the olive were received at the Agricultural Experiment Station from Merced

are favorable to its development, is given by the history of the infected orchard in Merced county, of which an account is given in Bulletin 120. In 1893 a single tree was found infected on one side of the orchard. In 1898 several trees were dead and the disease had spread to a large part of the orchard. In 1900 the orchard had become so badly infected that it was useless and was dug out. From a single infected tree the disease had passed in seven years throughout the orchard and practically destroyed it.

**THE NEW OUTBREAK.**—In the infected area discovered this year the conditions are somewhat different. None of the orchards are more than three or four years old and the trees were evidently infected before they were planted—that is, they were diseased when obtained from the nursery. This is evidenced by the fact, vouched for by a resident of the district who has had exceptional opportunities for observation, that the trees from only one nursery show evidences of disease, and that practically all the trees from that nursery are affected. From the appearance of the trees in September, 1901, there can be little doubt that the virulence of the disease in the new locality will at least equal that displayed in the locality first affected. It is practically certain, therefore, that none of these young orchards where the disease now shows will ever come to bearing age, and the sooner they are uprooted and destroyed the better for their owners, who will be spared the expense of maintaining useless trees, and the better for their neighbors, whose orchards, by prompt action, may be saved from infection.

**DESTRUCTION OF AFFECTED TREES.**—There can be no doubt in the minds of those who have witnessed the destructive effects of this disease in warm climates that any young trees showing undoubted symptoms of olive knot in such climates should be destroyed immediately. The same treatment would undoubtedly be the wisest in the case also of old trees or of affected trees in cooler localities in California, if we consider the interests of the olive-growing industry as a whole; for, though the knot may have and probably has extended to several localities already, the policy of destroying the affected trees as soon as found will certainly retard its spread, even though its total eradication is impossible. Whether the attempted eradication is carried out by county horticultural commissioners or by the proprietors of the orchards themselves, the question will arise whether only those trees which show undoubted knots should be destroyed, or whether the uprooting and burning should be extended to all the trees in an affected orchard. It would be extremely expensive and probably useless to adopt the latter course if the disease had extended widely to many localities and in many old orchards. As, however, but a very small percentage of the old orchards are at present affected, and as the young affected orchards will never be of any value, the latter course is undoubtedly the wisest to adopt and the safest for the olive growers as a whole. All the trees in young orchards which are just beginning to show knots, and which were probably infected in the nursery from which they came, are probably diseased. A grower writes to the Agricultural Experiment Station regarding a young orchard where only a part of the trees showed knots above ground: "I dug up several trees that I had reason to suspect, but which showed nothing above ground. These, too, were found a mass of knots." Even though some of the trees in such an orchard do not contain the germs of the malady, it is impossible to pick them out with any certainty; and if but one or two infected trees are left, they will sooner or later infect the whole orchard. It is moreover useless to plant young trees, even healthy ones, in places from which diseased trees have been taken. Such replants cannot thrive and will be literally covered with knots the first year after planting.

**EVERY OLIVE GROWER SHOULD GIVE HEED.**—In view of the serious nature of this disease, which threatens to make olive growing impossible in some of the most favorable localities of the State, it behooves the olive growers to co-operate heartily with the horticultural commissioners in hunting out and destroying all cases of the disease wherever it occurs. It is especially necessary that every olive

nursery should be carefully examined and no one should plant young trees from a nursery before they have satisfied themselves by personal inspection, or have received a satisfactory guarantee from the nurserymen or the county horticultural commissioner that the nursery is free from any case of the disease. The disease is highly infectious, so that a tree apparently healthy, but growing near a tree which shows signs of the disease, almost certainly contains the germs of the disease itself.

Those who are unfamiliar with the symptoms can obtain Bulletin 120 by applying to the Agricultural Experiment Station at Berkeley. In this bulletin the disease is described with sufficient detail to enable any one to recognize it. In buying young trees for planting it is well to remember that it is possible for the nurseryman to remove the knots from slightly affected trees, so that they may appear healthy when received by the purchaser. Such trees will almost certainly develop the disease later, after planting in the orchard. The only safe method is to examine the trees in the nursery, preferably in July or August, at which time the knots are growing rapidly, making it impossible to disguise the disease in a badly affected nursery.

#### An Olive Investigation.

Messrs. N. P. Chipman, Fred H. Busby and Clarence Wetmore, the committee appointed by the last annual convention of the California Fruit Growers' Association to gather data for a report on olive culture in this State, are energetically at work, addressing inquiries to all the leading growers of the berry, and receiving and filing answers. The inquiries sent out are of the most exhaustive nature, covering all of the main facts as well as important details bearing on the subject. They ask the acreage in the fruit, the different varieties that are being raised and their success, the quantity of green and ripe pickled olives produced by counties, ruling prices at the ranches for the berries, the character of soils in which they are planted, the extent to which irrigation is practiced, the Eastern market for ripe pickled olives, the number of years that elapse before the tree comes into bearing, its susceptibility to insect pests, and whether the different varieties can be grafted upon different stock. In this way the latest statistics regarding this important industry will be on hand by the time this season's crop is cared for, and the forthcoming report will not only be read with interest, but is expected to have great value to those who contemplate going into olive culture.

#### Woolly Breeches in Alfalfa.

**TO THE EDITOR:**—I send you a weed which is giving considerable trouble in our alfalfa fields, especially on sandy soil. The main trouble is the woody stem, which is hard on the sickle of the mower.—ALFALFA GROWER, Fresno county.

The weed is identified by Mr. Davy of the University as "woolly breeches" (*Heterotheca grandiflora*). It is said to be biennial, i. e., coming up from seed one season and flowering and dying the next, but this point has not been confirmed for California. The weed is a "winter grower," thus getting ahead of the alfalfa, and being troublesome at the first time of cutting, otherwise it would seem as though the mowing should cut it off before it had time to get woody. Under these circumstances the most satisfactory method of treatment would be to pull the plants when the ground is soft and as soon as they are strong enough and tall enough to bear it. In some parts of the State it is found profitable to "rogue" mustard out of the grain fields; and if it pays to do so with a grain crop which yields little profit, it would surely be more profitable on good alfalfa land. If the weed cannot be pulled satisfactorily, it will be necessary to hoe or chop out the young plants in the winter when the alfalfa lies low.

#### Whitewash and Lice Paint.

**TO THE EDITOR:**—"Whitewasher," Volta, can make a most excellent whitewash by slacking lime with hot water in a tight box or barrel, keeping the vessel tightly covered during the time of slacking. This is one secret of making durable whitewash. Dissolve a liberal amount of coarse ground salt in the water before putting it on the lime. Let stand for a day or two before using. Slack to the consistency of thick cream, thinning as desired when applying. Skim milk can be used for thinning to advantage. The one great point is to keep the steam from escaping when the lime is slacking. Whitewash made this way will be very white and will stand the elements surprisingly well.

In my last article it was stated that a good lice paint for the henhouse could be made by putting one pound of naphthaline flakes in one quart of kerosene oil. It should read one pound to one gallon of the oil.

Napa.

A. WARREN ROBINSON.



1.—Young tree planted to replace one destroyed by knot. Photograph taken twelve months after planting. 2.—Large knot on still vigorous branch of old tree. 3.—Small knots on much weakened branch.

#### The Olive Knot Illustrated.

county. This disease—olive knot—is common and destructive in southern Europe, where it is known as tuberculosis of the olive. At the time of its discovery in Merced county the hope was entertained that it had not yet spread to any other part of California and that it could be eradicated by prompt and appropriate measures. With the purpose of furthering this desirable object the county horticultural commissioners were communicated with and Bulletin 120 was published describing the disease and its disastrous effects.

**VIRULENT CHARACTER OF THE DISEASE.**—Unfortunately the hope entertained in 1895 has not been realized, and this year another and larger infected area has been discovered at a long distance from the first, and there is strong reason to suspect that there are still others. An idea of the destructive nature of the disease, where the climatic conditions



## Agricultural Review.

### ALAMEDA.

**FINE FIGS.**—Niles Herald: John Rock of the California Nursery Co. has some fine specimens of Smyrna figs of local product, the fruit being nearly as big as one's fist and has the flavor and fine grain of the imported article, proving beyond question that the Smyrna fig can be successfully grown in California.

**EMERYVILLE CANNERY TO CLOSE.**—Oakland Enquirer: The pack of fruit at the local plant of the California Central Canning Co. has ceased for the season, and at the present time all efforts are being directed toward disposing of the tomato crop. Since this season's pack commenced, early in June, the side track used by the cannery has been filled with cars nearly all the time. During the early part of the season very little shipping was done, although considerable fruit was on hand from the previous season's run. Later, however, the outbound shipments commenced. What the total amount shipped is, the men in charge refuse to say, but it is certain that it largely exceeds that of any of the preceding seasons.

**HEAVY PRUNE SHIPMENTS.**—Niles Herald: The E. A. Ellsworth drier is about to close after the most successful season's run it has ever experienced. Since August 1 thirty-four carloads of dried apricots and prunes have been shipped East from here, which have been worked up, packed and graded at the drier. Of this number twenty-five carloads have been packed in fifty-pound boxes. In addition six were shipped to San Jose and two to San Francisco, while there are yet eight carloads to go before October 20. Not all of this fruit was grown in this immediate vicinity, as 263 tons of prunes were shipped in to the Ellsworth drier in the ten days prior to October 5 to be graded and packed. Ten carloads of prunes go to fill an order from England and one to Genoa, Italy. The California Dried Fruit Co., which had an agent in the local field, paid out \$43,000 in five weeks for prunes, while an equal amount has been paid out by the Ellsworth drier.

### BUTTE.

**HEMP GROWING.**—Oroville Register: Geo. Thresher was over from Gridley recently, and, speaking of the hemp industry, said that Mr. Heany had finished work on his home ranch, where he had 200 acres devoted to hemp, and would now begin cutting on the Hefner ranch, where he had 90 acres planted. Mr. Heany reports unusually heavy crops this year—the best he has had at any time since he began growing hemp in the county. He gets from 1500 to 2000 pounds of hemp fiber to an acre and bales and ships this fiber East. It goes from here to Galveston, and thence by water to Eastern cities further north. The price realized here is about \$90 a ton for the fiber.

**EARLY ORANGES.**—Oroville Register: E. Gilman of Thermalito tells us that the oranges are rapidly coloring and by the first of November he will begin to ship fruit. He thinks fruit generally will be two weeks earlier than it was last year.

**A NEW APRICOT.**—Chico Enterprise: W. W. Savage, representing the Oregon Nursery Co., is in this city for the purpose of introducing the Tilton apricot. This particular species of apricot is claimed to be frost-proof, and it is said that it bears much more abundantly than any other variety.

### KINGS.

**THE PRUNE YIELD.**—Hanford Sentinel: The estimated amount of prunes of last season's crop on hand in this county unshipped is about 250 tons. The crop of the present harvest, including all that will be grown, both in and out of the Association this year, is estimated at 1100 tons, or about eighty carloads.

### LOS ANGELES.

**GREW FROM A PEACH PIT.**—Pasadena Star: Mrs. R. R. Trout of this place went over to the Los Angeles Chamber of Commerce recently with a basket of as handsome peaches as is often seen, even in this favored country. The remarkable thing about these peaches is that they were grown on a tree that is only two years old and is a seedling. Only a peach pit was planted and the little seedling tree was cared for and now has rewarded the owner by thus early producing several dozens of handsome and delicious fruit. The peaches resemble the Salway and ripen about the same time. They have a delightful fragrance and a good flavor. Mrs. Trout took the fruit to the Chamber of Commerce that it might be sent to the Buffalo Exposition, the Chamber desiring it for that purpose.

**ORANGE GROWERS CHOOSE DIRECTORS.**—Pasadena Star: At the annual

meeting of the Pasadena Orange Growers' Association the following directors were chosen: M. H. Weight, Byron Lisk, W. T. Clapp, J. E. Jardine, E. L. Farris, J. H. Woodworth. Mr. Jardine is the only new member of the board. Mr. Woodworth was made chairman and Mr. J. T. Jones was re-elected secretary. The lemon growers also met and discussed a number of matters relating to that industry. E. W. Barry was elected a member of the directory in place of E. M. Beaman. It was reported that the sales for the month of September had averaged \$1.10 per box. A dividend of 3 cents on last year's business was declared.

### MERCED.

**GOOD CORN CROP.**—Merced County Sun: Corn husking has begun in this county. The crop of this cereal gives promise of excellence in this section, both as regards yield and quality. The bottoms along the Merced river will furnish a greater supply than usual, and the uplands where corn is raised are apparently more than holding their own. The product commands an excellent price at present, and those fortunate enough to have fields of "waving corn" are far ahead of their wheat-raising brethren. Then, too, the husks, which when cured are used to supply clothing for the tamale of commerce, bring from 4 to 5 cents a pound in the metropolitan market.

### ORANGE.

**CANNERY OUTPUT.**—Anaheim Gazette: The cannery at this place has closed down for the season. The output has been eighty carloads of canned fruits and vegetables—apricots, peaches, tomatoes, etc. It was not so large as last year by twenty cars, on account of the scant tomato crop. The cannery last year made a record run on tomatoes, many carloads being shipped to the Philippines and Europe.

### RIVERSIDE.

**A BIG ORANGE COMPANY.**—Riverside Press: Incorporation papers have been filed in the County Clerk's office, by virtue of which the National Orange Company comes into existence. The company has a capital of \$800,000, of which there are almost \$400,000 subscribed. The incorporators are E. A. Chase, S. H. Herrick, M. J. Daniels, E. S. Moulton, H. B. Chase, R. W. A. Godfrey and R. B. Sheldon, and these men constitute the board of directors. The officers for the first year are: E. A. Chase, president; S. H. Herrick, vice-president; M. J. Daniels, treasurer, and E. S. Moulton, secretary. The lands of the corporation comprise some of the best frostless orchards in the valley, and the character of the incorporators and their record as business men argues well for the future of the company. The company is organized for the purpose of packing and shipping fruit, dealing in orange lands, buying and selling oranges, etc.

### SAN BENITO.

**APPLES IN GOOD DEMAND.**—Hollister Advance: About nine-tenths of the apple crop of this valley this season has been purchased by H. Z. and George Anderson of San Jose. The packing is done by Chinamen, who receive \$1.50 per day and 25 cents per hour overtime. The apples are carefully sorted and all that are not sound are put aside. Each apple is wrapped in paper, and the fruit is packed in four tiers, so tightly that none will move around in the handling necessary in shipping. The apples are shipped to all parts of the world. Pears are being packed for shipment to Australia.

### SAN DIEGO.

**SEASON'S RAISIN CROP.**—San Diego Union: Conservative estimates of the raisin crop in El Cajon valley are that this year's yield will be 25% greater than that of last year. The quantity is better. There have been no rains and no unfavorable weather, and the harvest has been secured in prime condition. El Cajon valley includes about 3000 acres which are planted to vineyards, few of which are irrigated. The crop of 1900 was equivalent to fifty carloads—450 to 500 tons. The yield last year was worth about \$60,000. Last year was an off season on account of the dry weather, the rains coming too late to be of any use, but the heavy rains of last fall set the vineyards going again and the yield this year is such as to encourage the growers. Next year the product will probably be larger than this.

### SAN JOAQUIN.

**LARGE GRAPE CROP.**—Lodi Sentinel: A few years ago some farmers in San Joaquin county pulled up their grape vines, because they feared the business of growing for the wineries would be overdone; but time has demonstrated that the demand is constantly increasing as the market for wines is enlarging. Prices are higher this year than ever before and the crop yield is much larger than dealers figured on; but the market continues high

and will stay so to the end of the season. Prices run in this county from \$18 to \$22.50 per ton for wine grapes and choice table grapes are higher and in active demand for the Eastern market. It is estimated the total output in this county this year will be about 4000 tons of wine grapes, and the local wineries have taken nearly all of the product offered, there being but little picked up for San Francisco establishments. Lodi is a big shipping point for table grapes, twenty carloads having been sent East from this point during last week.

### SANTA BARBARA.

**THE BEET HARVEST.**—Santa Maria Times: The harvesting of beets is in full blast, and, although the crops are not ripening as rapidly as they should, the factory has an ample supply to keep the wheels moving. Some of the farmers have not done as well as they expected, while others are making more money than men who have stands of beans. For instance, Geo. Gaster at Guadalupe had nearly fifteen tons to the acre, and, as he sold his beets according to percentage, he received \$5 per ton, or \$75 per acre. His cost of production is \$10 per acre, which nets him a snug sum of \$65 for each acre grown. This, however, is not the best crop by any means. There are other farmers who have still better crops running even as high as eighteen to twenty tons per acre.

### SANTA CLARA.

**GRAPES AVERAGE POOR.**—San Jose Mercury: The grapes coming into the wineries at Los Gatos are in some cases so dried and shrunken that water has to be added to force the pomace to and into the chutes carrying it to the fermenting tanks; sometimes brown sugar is added, owing to the lack of saccharine matter in some varieties of grapes. Resistant vines will be in great demand this year for transplanting vineyards, and several contracts for planting out new vineyards have been already let. Information from well-informed sources places this year's vintage of wine in Santa Clara valley at about 800,000 gallons, against 1,000,000 gallons last year, and more than 5,000,000 gallons short of what the production was a few years ago. This tremendous falling off in the vintage of California wine in this section of the State is due partly to the excessive drought of the past two or three years and partly to the ravages of phylloxera among the vineyards.

### SANTA CRUZ.

**FALL PIPPINS FOR LONDON.**—Watsonville Pajaronian: Scurich Bros.' car of Fall Pippins was sold in London last Friday and averaged 9 shillings 6 pence, or about \$2.28, a box. Less the cost of transportation, commissions, sale charges, etc., the car will net \$1.28 per box at Watsonville. If the Fall Pippin can stand the trip and sell satisfactorily the Bellefleur also should do well.

**LADYBUGS ARE ALL RIGHT.**—Watsonville Pajaronian: The ladybugs have been doing effective work on the woolly aphis, and many orchards which were badly infested a few weeks ago are now clean. The winter quarters of the aphis—at the roots of the tree—is where the fight should be carried on. Non-resistant roots are recommended as providing the best means of keeping the aphis away from apple orchards. In Australia and Tasmania Northern Spy stock is used, while in Chile roots of a variety called Hedibro are used. In Chile aphis on roots are fought with hot water. The ground is cleared away from the roots and hot water is poured in. It is claimed that the application kills the aphis.

**TWO-POUND APPLE.**—Santa Cruz Sentinel: H. Kerns, from a tree growing in his garden at 15 Caledonia street, East Santa Cruz, brought us a Gloria Mundi apple that measures 14 inches in circumference and weighs two pounds.

**PRIZE SWEET POTATO.**—Watsonville Register: N. Shoko, who is farming on the Steigleman place, near Watsonville, brought a prize sweet potato to town. The tuber weighed three and one-quarter pounds and was one of many grown by Mr. Shoko on a half-acre tract.

### SONOMA.

**A BIG WILDCAT IN CHICKEN ROOST.**—Santa Rosa Press-Democrat: J. E. Sweet, who lives about 1½ mile from Freestone, had an encounter with a huge wildcat recently in one of the chicken roosts on his place and came out victor. Of late the chicken roosts have been despoiled and some of the finest of the feathered denizens have been carried away or killed. He caught the wildcat in the act of robbing the roost. With a bullet from his rifle he crippled the thief and his hound quickly finished the business.

**HOT WEATHER GOOD FOR GRAPES.**—Santa Rosa, Oct. 12: Friday was one of

the warmest days of the year here. The hot weather will be of great benefit to the grape men, as it will bring the second crop to a fine state of perfection. It is also appreciated by fruit driers.

**A GOOD INVESTMENT.**—Sebastopol Times: Over \$900 for a crop of peaches off seventeen acres is not a very bad record. Last May, Jno. L. Ward purchased twenty acres of land on the Surryhne tract, 4 miles north of Sebastopol. The property was sold at administrator's sale by order of the Superior Court and it cost Mr. Ward \$1800. Seventeen acres are in full bearing peach trees and the remaining three are unimproved. At the time Mr. Ward made the purchase the property was in excellent condition, the land having been plowed and the trees pruned. He had nothing to do but wait for the fruit to mature and gather it for market. The crop has just been harvested and Mr. Ward's returns amount to exactly \$905.40. This is \$5.40 more than half the sum he paid for the twenty acres five months ago, and \$850 is net.

### SUTTER.

**THE ALMOND MARKET.**—Sutter County Farmer: The almond market remains about the same and the growers who refused the offers to contract in August are still holding for better prices. The market earlier in the season was more of a speculative nature. From 10c to 12½c is about what is asked here, but the buyers are doing little rustling.

**RASPBERRIES IN OCTOBER.**—Sutter Independent: On a half acre of raspberry bushes on the Bunce place are an abundance of ripe and green berries and blossoms. One of Mr. Bunce's sons, while working in his father's orchard, discovered that the vines were in blossom. On a closer investigation he found a quantity of ripe and green berries of very large size and exquisite flavor. He at once set about picking the berries and in an afternoon brought ten baskets into market, selling the same at 20 cents per pound.

**MORE GRAPES.**—Land owners in Sutter are dropping wheat and planting grapes. They can pay expenses the third year by raising wine grapes, and after that the returns are good. Some sixteen-year-old Zinfandel grapes are yielding about seven tons to the acre. The wineries are paying \$20 a ton this season.

### TEHAMA.

**SHIPPING APPLES EAST.**—Red Bluff News: Wheel Hazen, the champion apple raiser in Tehama county, has sold part of this year's crop of apples to a New York buyer. Preparations have already been made for packing the crop and 5000 boxes have been hauled to the orchard near Manton. About half the crop will be shipped to New York. The apples will be wrapped in paper, of which 3000 pounds have been purchased for the purpose.

**A HEAVY CLIP OF WOOL.**—Red Bluff News: The band of 10,000 sheep belonging to Bell & Moore have been shorn and the clip secured, amounting to 53,600 pounds, or over five pounds per head. The band was composed only of ewes and lambs, and the clip was only a four months' growth.

### YOLO.

**THE PITS ARE CRACKED.**—Winters Express: The pit cracker has finished its work and the machinery is being shipped to San Jose, where there is a large quantity of apricot pits to be cracked. Over 300 tons have been handled, about 100 of which were shipped in, and the price paid has averaged more than \$10 per ton, thus bringing to the fruit growers over \$3000 for a by-product that formerly went into the fire. Besides, the cracking industry has given employment to a large number of people for nearly two months, and the wage account has exceeded \$1500. So it will be seen that quite a tidy sum has been left here that a year or two ago was a minus quantity. The kernels are shipped foreign and used in various ways. The market is limited and the chief buyers are J. F. Ulrichs & Co., who own the cracking machines.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.





## THE HOME CIRCLE.

### Adam: the Man Who Never Was a Boy.

Of all the men the world has seen  
Since time his rounds began,  
There's one I pity every day—  
Earth's first and foremost man;  
Just think of all the fun he missed  
By failing to enjoy  
The dear delights of youthtime,  
For—he never was a boy.

He never stubbed his naked toe  
Against a rock or stone,  
He never with a pin-hook fished  
For minnows all alone.  
He never sought the bumblebee,  
Among the daisies coy,  
Nor felt its business end,  
Because—he never was a boy.

He never hookey played, nor tied  
A bright and shining pail  
Down in the alley all alone,  
To a trusting poodle's tail.  
And when he home from swimming came,  
His pleasure to destroy  
No slipper interfered  
Because—he never was a boy.

He might remember splendid times  
In Eden's bowers—yet  
He never acted Romeo  
To a six-year Juliet.  
He never sent a valentine  
Intended to annoy  
His good but maiden aunt,  
Because—he never was a boy.

He never cut a kite string, no,  
Nor hid an Easter egg;  
He never spoiled his pantaloon  
A playin' mumble-peg.  
He never from the attic stole  
A 'coon hunt to enjoy,  
Nor found the "old man" waiting,  
For—he never was a boy.

I pity him, why should I not?  
I even drop a tear;  
He never knew how much he missed;  
He never will, I fear.  
And always when those dear old days  
My memories employ,  
I pity him, Partb's only man  
Who—never was a boy.

—Pittsburg Dispatch.

### Destined by Fate.

The waiter ostentatiously placed the small bill before her.

"One and a penny, please, Miss." Raymond Hillyard, handsome and distinguished looking, sitting opposite, glanced up with assumed lazy indifference and resumed eating.

The waiter was busy whisking about his rapkin, preparatory to being paid. "Some more coffee, please," said the girl, "I'll remain a little longer."

The man disappeared, shortly returning with the order.

She began to sip her coffee very slowly. Her table companion had ample opportunity of studying her. What he saw was this:

A broad, smooth forehead, with dark hair clustering in rebellious curls around her temples; a pair of deep gray eyes, with long lashes; a short, straight nose; a dear little mouth, and a rather square jaw, which showed resolution and determination. The hands, small, well kept and shapely, were devoid of rings.

"Let me see," he mused, "the hat cost one and sixpence three farthings and is home trimmed, very neat, and suits her. The blouse was four and eleven off the peg, and the lace around the collar could be bought at any cheap milliner's for seven three farthings the dozen."

"Waiter, one omelet with herbs," he said, suddenly, to the man who hovered around like a phantom bat.

He vanished like lightning. A few minutes later the proprietor strolled up to the table, glanced suspiciously at the girl, coughed once or twice, then said:

"We shall be closing up very soon, madam. Are you expecting a friend?" "Yes," was the answer. "I won't wait much longer."

The waiter appeared again and added the coffee to the bill.

"Thank you," said the girl, "you needn't stand here."

The waiter withdrew. Hillyard smiled and began his omelet, which had been brought him.

"Pardon me, but I believe I am

right in saying that you haven't got the money with which to pay your bill," put in Hillyard, at last, in a low tone. "The manager, I fear, is of the same opinion."

For a moment her eyes flashed indignantly; the mouth quivered.

"How dare you speak to me like that!" she said. "What do you take me for!"

I take you for what you are—a lady," he answered gently.

The answer flabbergasted her for a moment. She could not meet his scrutinizing gaze.

"Pray allow me the favor of adding your bill to mine," he continued calmly.

"You must admit that you are in an awkward corner, and that your friend is a myth."

The waiter, somewhat agitated, drew near again.

"Curacao," he ordered sharply, and the gentleman with the napkin disappeared with remarkable celerity.

"Really," stammered the girl, "I—I—don't know what you mean."

"I mean what I say," he answered firmly. "I will repeat it again if you wish. I don't believe you have the money with—"

She motioned him to desist.

"Hush! hush! You have no right to say that. Don't, please don't."

Her earnest entreaty compelled him to stop.

"You can not deny that I am right?" he demanded, in a manner that plainly showed he would have a direct answer.

Her face was a deep crimson.

"Yes, you are right," she replied at length, but with a great effort. "It was very wrong, very wrong, I know, but I was so—so hungry, and I thought that—"

"That it was possible you would meet with a good Samaritan," put in Hillyard, accurately divining her thoughts. "A very risky game to play. Suppose you had not met me—what then?"

She laughed uneasily.

"But you see, I did meet you."

"Yet you seem very reluctant to allow me to add your bill to mine."

The color flamed her cheeks again.

"It must be a loan," she declared, emphatically. "I came in here in sheer desperation. You don't know what it is to be poor, and oh, so hungry."

"Yes, I do," he answered, quietly.

"I am so sorry," she whispered, gently. "I did not know. I had no idea. I never thought—"

"Pray don't apologize," he interrupted, again assuming his lighter vein. "If you are really sorry you will pass me your bill."

"Believe me," she replied gratefully, handing him the flimsy bit of paper. "I am truly grateful. Fortune has not been too kind to me of late."

"Nor to me," said Hillyard. "Dame fortune is a fickle jade, and has to be treated accordingly. Woo her too much, she often turns and rends you. Treat her with indifference and she will veer around and fawn upon you."

"She has, at any rate, been good to me to-night," said the girl. "One moment. I shall consider this bill a debt of honor. Where can I send you the amount? It—it is not too much, is it?"

"Too much for you to pay now, though," he answered, laughing.

He produced his card, which bore his name and address. She put it carefully in her purse.

"I will send you the amount to-morrow," she declared.

Hillyard smiled.

"To what address shall I write an acknowledgment?"

"Oh, Miss Delling, care of Malley's library, Westminster Bridge road," she replied hurriedly. "There will be no occasion to reply," she hastened to add.

Hillyard made a careful note of the address.

The account was settled. As they quitted the shop the manager bowed and smiled in a manner that baffles description.

"May I see you to your door?" asked Hillyard.

"No, I would rather you would not, thank you."

"Then I insist on seeing you into a cab."

"No, I really—"

"Come, I insist."

And before she could make further remonstrance he had hailed a hansom. He put her inside and handed the man two shillings.

"I have paid your fare. Where to?" "I will tell the cabman, thank you."

"Certainly," he said, rather coldly. "If that is your wish." He raised his hat. "Good night."

"Thank you, oh, so much for your goodness. Good night."

In another moment she had gone.

"Hillyard, congratulate me," cried Fairleigh, a handsome young fellow, overflowing with good spirits, hurrying into his friend's comfortable chambers.

"I'm engaged."

"I do congratulate you most heartily," returned Hillyard, warmly.

"Who is the unfortunate lady?" he inquired smiling.

"A Miss Cunningham, whom I met last summer at a friend's house. The best girl in the world, I assure you."

"They are always that," answered Hillyard, quietly.

"Oh, you needn't be so beastly sarcastic," put in Fairleigh, "just because you've never been in love."

"How do you know that?" asked Hillyard.

"Because you are not a lady's man at all."

"No, perhaps not," said Hillyard.

He was thinking of the girl whom he had met at the restaurant. Had he made such a bad impression on her? He knew she had made a great impression on him. In short, he had fallen in love at first sight.

"Here, let me show you her portrait," rattled on Fairleigh, taking a small photograph from his letter case. There, isn't that a sweet face?"

"Very," declared Hillyard, but with a touch of bitterness, for he realized that all the sunshine had gone out of his life, for the face he gazed at was the face of the girl whom he had befriended.

"It is just like my ill luck," he muttered.

"What's that?" cried Fairleigh, sharply.

"Nothing, nothing. I hope you will be very happy."

"I'm sure we shall. Ta-ta, old man. I must be off now. I'll look in again soon."

"No wonder she gave the name of Delling," mused Hillyard, bitterly.

He extracted a postal order from his pocket for one and five and a short note, which ran:

"With Miss Delling's sincere thanks."

"Perhaps," he thought, "I ought to tell young Fairleigh. But no; it would compromise the young lady. Better leave it as it is. I may be wrong."

Then he settled down to write an article, and by the time he had posted it to his typist it was 9 o'clock; so he went to the restaurant where he had met "Miss Delling."

Needless to say, he ate his meal in isolation.

Three months passed away. Hillyard was unable to find any trace of "Miss Delling," though he had visited Malley's library many times. Fairleigh had gone to the country pending his coming marriage. Hillyard still kept his secret.

It was a strange fate that one day led him to visit his typist's to call for a manuscript which he especially wished for. But when "Miss Delling" came forward in answer to his inquiry Hillyard was completely taken back.

"You have certainly succeeded admirably in keeping out of my way," he stammered. "Allow me to congratulate you on your engagement to my friend Fairleigh, Miss Cunningham."

The girl was visibly agitated.

"How did you find out my name was Cunningham, and who told you I was engaged?"

"My friend showed me your portrait."

"There is some mistake," she whispered, hurriedly. "Years ago my father left America for England, taking with him my twin sister, leaving me

with my mother in America. My father died, and shortly after, my mother. My name is Cunningham, and I have been trying for months to find the whereabouts of my sister. None will ever know what a struggle I have had for existence. Can you help me learn whether your friend is engaged to my sister?"

"Believe me; I will do all I can," returned Hillyard. "Give me three days. This is Tuesday. Will you meet me at the restaurant on Friday evening at 7?"

She smiled an assent.

They dined together on Friday—a happy pair. Fairleigh was indeed engaged to Miss Cunningham's twin sister, and all the mystery was cleared up.

"But why did you not give me your proper name?" asked Hillyard.

"You—you see you were quite a stranger to me. I thought it was better we should not meet again," she answered shyly.

The Fates have thought otherwise," he said smiling. "Fate has brought us together again. This time you will have no hesitation in adding your bill to mine?"

There was a pause.

"Dearest," he whispered, very softly, "won't—won't you add your life to mine, for me to keep always; for better, for worse, till—"

Their eyes met. It was enough.—Penny Pictorial Magazine.

Two United States Supreme Court Jokes.

An eminent lawyer, one of the most eminent in the United States, was in the midst of an argument in defense of the patent rights of his client to a new-fangled collar button that was being unlawfully manufactured by the people of the other side of the case. The distinguished counsel was describing the patent referred to, and its many advantages, when Justice Shiras interrupted him, and in a most serious manner observed, "I should like to ask the learned counsel if his client manufactures a collar button that won't roll under the bed?"

Of course, the court was shocked. Some young people in the seats reserved for spectators tittered, and the marshal, rapping on his desk with his gavel, roared, "Silence in this honorable court!"

The eminent counsel maintained his gravity, although his soul must have been deeply stirred, and had presence of mind enough to turn the incident to his own advantage, saying, with emphasis, "I have the honor, to inform the court that the collar button manufactured by my client is unique in that as well as in other respects, but my client would not be so selfish as to patent so important a benefit to mankind."

The only other time, so far as anybody can remember, that a joke was perpetrated in the Supreme Court was when Thomas Wilson, of Washington, was arguing a case. Some people insist that he did not intend to be funny, but made his remark in sober earnestness. However, Mr. Wilson was arguing a case of some importance, and was dwelling upon propositions that were known to and accepted by every law student in the country, when he was interrupted by the late Justice Miller saying, "Cannot the counsel safely assume that this court understands the rudiments of law?"

"I made that mistake in the lower court," retorted Mr. Wilson, "or this case would not have been here on appeal."—Chicago Record.

### A Figure of Speech.

A strange little boy who'd been to school, And was up to all sorts of tricks, Discovered that nine, when upside down, Would pass for the figure six;

So when asked his age by a kind old dame, The comical youngster said:

"I'm nine when I stand on my feet like this,

But six when I stand on my head."

—Trutb.

Ask a person, "What kind of a noise annoys an oyster?" After the victim has given it up, he is told, "A noisy noise annoys an oyster."



## Nervousness.

What may be called a minor degree of neurasthenia is the indefinite condition called "nervousness." Sufferers from it are not incapacitated for business or social duties, nor are they seriously ill, like the confirmed neurasthenic, yet their existence is often a pitiable one. They are restless and unable to fix the mind on any subject, sleep is disturbed, and often there is an undefinable fluttering sensation within the chest..

They may have a good appetite and not feel ill physically, but herein lies their great danger, for they persuade themselves that all they need is a nerve tonic of some sort, a little stimulant, and they dose themselves with various advertised remedies, one after another, or begin to drink a little wine or spirits.

The stimulation makes them feel better for a time, but the inevitable reaction comes, when they feel worse than before, and run again and again to the bottle of "tonic," or drink until they become confirmed drug takers or dram drinkers—and which is worst it would be hard to say.

The fatal mistake which these persons make is in assuming that they are not ill physically, but only "nervous." In almost every such case a careful examination by a physician will bring to light disorder of some organ, and show that the patient is physically ill, and should be treated accordingly. It is not nerve tonics or stimulants that he needs, but a course of medical treatment—dietetic, hygienic, and perhaps medicinal.

In the majority of cases it will be found that the digestion is at fault. There may be no evident symptoms of dyspepsia—no nausea, distress after eating, or eructations—the food may be scarcely digested at all. The stomach does its work, perhaps, in the preliminary digestion of the food, but the intestines, where the assimilation of nutriment is, or should be effected, are at fault.

The food is not elaborated into such shape that it can be taken up by the lacteal vessels and carried to the nerve and other structures that need constant renewing, and so the tissues suffer from partial starvation.

Furthermore, the imperfect intestinal digestion results in the manufacture of various poisons, which are absorbed and cause a morbid condition of the nervous system.

Treatment should be directed to the intestinal trouble and not to the "nervousness," which will speedily disappear when once the causal condition has been cured.—Youth's Companion.

## Tree-Climbing Dogs.

The pack had many interesting peculiarities, but none more so than the fact that four of them climbed trees. Only one of the hounds, little Jimmie, ever tried the feat; but of the fighters, not only Tony and Baldy but big Turk climbed every tree that gave them any chance. The pinyons and cedars were low, multi-forked, and usually sent off branches from near the ground. In

consequence the dogs could, by industrious effort, work their way almost to the top. Now and then a dog would lose his footing and come down with a whack which sounded as if he must be disabled, but after a growl and a shake he would start up the tree again. They could not fight well while in a tree, and were often scratched or knocked to the ground by a cougar; and when the quarry was shot out of its perch and seized by the expectant throng below, the dogs in the tree, yelping with eager excitement, dived headlong down through the branches regardless of consequences.—From "With the Cougar Hounds," by Theodore Roosevelt in the October Scribner's.

## DOMESTIC ECONOMY.

## Domestic Hints.

**CHOCOLATE CARAMELS.**—Into a saucepan put a quarter of a pound of grated, unsweetened chocolate. Add four ounces of butter, a pound of brown sugar, a gill of molasses, a gill of cream and teaspoonful of vanilla. Stir this over a slow fire until thoroughly mixed, and then boil it until it cracks when dropped into ice water. Turn into greased shallow pans to the depth of half an inch and stand aside to cool. When nearly cold mark the caramels into squares.

**BLUEFISH FRIED.**—Split a well-cleaned bluefish through the back, cut each half into three pieces, season with one tablespoonful of seasoning salt, letting lie one-half hour; then roll the fish in flour; melt one tablespoonful of lard or fat in a frying-pan; fry light brown on both sides; when all are fried arrange them on a hot dish and serve with French fried potatoes and mustard sauce, or without any sauce. Bluefish fried in larding pork is excellent.

**LITTLE NECK CLAM FRITTERS.**—Chop medium fine seventy-five Little Necks. To a pint of flour add the beaten yolks of three eggs, half a teaspoonful of lemon juice, a dash of cayenne and an ounce of melted butter. Mix well, and make a batter by adding about a gill of milk. Add the clams, and if the batter is too thick add a little of the clam broth. To make them light beat the mixture well; drop spoonfuls of it in very hot fat, and fry to a golden brown.

**CALF'S BRAINS.**—The brains, after being cleansed, boiled and cut into small collops, must be added to some well-seasoned white sauce, previously made hot. Mix them lightly in this, and then put this preparation into some fancy paper cases, strew fried breadcrumbs upon the tops, then put it into the oven for a few minutes, take them out, and dish up the cases on a napkin with fried parsley, and serve very hot. Ham, tongue, mushrooms, truffles or any kind of pickles may be added in small quantities.

## Hints to Housekeepers.

Surplus juices from pickling, preserving and canning peaches and other fruits should be carefully served for pudding sauces, mince pies, etc., later in the year.

Hominy croquettes are delicious for breakfast. Soften one cupful of cold cooked hominy with a little hot milk. Add the beaten yolk of an egg. Salt the mixture to taste, when it is cold form into croquettes. Fry in deep fat.

To prepare grape juice, cover the grapes with water and let them boil until the skins crack open. Then put them into jelly bags and allow them to drip over night. In the morning dissolve thoroughly in the juice. Seal carefully in jars.

A simple cure for a felon is as follows: As soon as the parts begin to swell, get the tincture of lobelia, and wrap the part affected with cloth saturated thoroughly with the tincture, and the felon is dead. An old physician says that he has known it to cure in scores of cases, and it never fails if applied in season. A cure for bone felon is much the same. As soon as the disease is felt, put directly over the spot a blister of Spanish fly about the size of the

thumb nail, and let it remain for six hours, at the expiration of which time, directly under the surface of the blister may be seen the felon, which can be instantly taken out with the point of a needle or a lancet.

To clear soup stock remove every particle of fat and add more seasoning if needed. To each quart of stock allow the white and shell of one egg. Beat the egg lightly, crush the shell and add both to the cold stock, then place all together over the fire. Stir constantly until the boiling point is reached, boil two minutes, cover, let simmer twenty minutes and strain through a double thickness of cheese cloth placed over a fine strainer.

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# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Oct. 16, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	69 1/2 @ 69 3/4	73 1/2 @ 73 3/4
Thursday.....	69 1/2 @ 69 3/4	73 1/2 @ 73 3/4
Friday.....	69 1/2 @ 70 1/4	73 1/2 @ 73 3/4
Saturday.....	69 1/2 @ 70 1/4	73 1/2 @ 73 3/4
Monday.....	70 1/2 @ 70 3/4	74 @ 73 3/4
Tuesday.....	71 @ 70 3/4	74 1/2 @ 73 3/4

### CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	35 1/2 @ 35 3/4	37 1/2 @ 37 3/4
Thursday.....	35 1/2 @ 35 3/4	37 1/2 @ 37 3/4
Friday.....	35 1/2 @ 35 3/4	37 1/2 @ 37 3/4
Saturday.....	35 1/2 @ 35 3/4	37 1/2 @ 37 3/4
Monday.....	34 1/2 @ 35 1/4	37 @ 37 1/4
Tuesday.....	35 1/2 @ 35	37 1/2 @ 37 3/4

### SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	97 1/2 @ 97 3/4	1 02 1/2 @ 1 02 3/4
Friday.....	97 1/2 @ 97 3/4	1 02 1/2 @ 1 02 3/4
Saturday.....	97 @ 97 1/2	1 02 1/2 @ 1 02 3/4
Monday.....	97 1/2 @ 97 3/4	1 02 1/2 @ 1 02 3/4
Tuesday.....	97 1/2 @ 97 3/4	1 02 1/2 @ 1 02 3/4
Wednesday.....	97 1/2 @ 97 3/4	1 02 1/2 @ 1 02 3/4

### WHEAT.

The market for wheat has developed little of an encouraging character the past week for the producing interests. The gambling and bucket shop crowd continue to shout about booms in prospect, their old cry to get suckers, and after they have gotten them to keep them on the string. These same boom shouters are eternally shorting the market or selling futures, for that is their business, but they talk differently from the way they act, for the reason that they want somebody to buy their grain on paper or their contracts, so they will have a chance to sell. Just like a shrewd horse dealer will endeavor to make others believe that the animal he is endeavoring to dispose of is a bargain at a much bigger price than asked, but he wants to let some one else in on the ground floor and receive the full benefit. These people who are constantly scheming, as they tell it, to benefit others, are not in the habit of letting out any of their own money. They prefer taking in cash from their victims. This gambling in wheat has done and is doing fully as much if not more to keep prices at low and unprofitable levels than any other cause, as it greatly encourages the production without increasing the consumption an iota. Shippers are doing considerable loading at this port, but it is mostly out of their own reserves. They are doing little or no buying, except at prices decidedly in their favor. Ocean freights are showing some weakness, and it is hoped that this will work to the benefit of wheat.

California Milling.....	1 00 @ 1 03 1/2
Cal. No. 1 shipping, alongside.....	95 @ 97 1/2
Oregon Valley.....	95 @ 98 1/2
Washington Blue Stem.....	97 1/2 @ 1 03 1/2
Washington Club.....	95 @ 97 1/2
OF qualities wheat.....	90 @ 92 1/2

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	68 1/2 @ 68 7/8	58 1/2 @ 58 9/8
Freight rates.....	42 1/2 @ 45 1/2	34 @ 36 1/2
Local market.....	\$1 01 1/4 @ 1 03 1/2	95 @ 97 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, 97 @ 97 1/2 c.
May, 1902, delivery, \$1.02 1/2 @ 1.02 3/4.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at 97 1/2 @ 97 3/4; May, 1902, \$1.02 1/2 @ —.

### FLOUR.

The outward movement is of fair volume, but most of the flour being shipped is either on consignment or contract. There is an easy tone to the market, cutting of rates being the rule rather than the exception, especially where deliveries of noteworthy size are being effected.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

### BARLEY.

Although the outward movement has been fairly active, and barley is still going aboard ship, mainly for Europe, not much

is now changing hands at this center on foreign account. Choice Chevalier is inquired for, and round lots of the same could be placed to fair advantage, but this variety and grade of barley is not offering in noteworthy quantity. Feed descriptions are receiving some attention on local account, with enough of the same on market to accommodate the demand. In quotable values for either brewing or feed barley there are no changes of consequence to note.

Feed, No. 1 to choice.....	72 1/2 @ 75
Feed, fair to good.....	70 @ 72 1/2
Brewing, No. 1 to choice.....	75 @ 82 1/2
Chevalier, No. 1 to choice.....	97 1/2 @ 1 02 1/2
Chevalier, poor to fair.....	75 @ 90

### OATS.

The market has been ruling moderately firm, more owing to the recent tolerably free purchasing on Government account than from any other cause. Local dealers are not inclined to operate freely or to purchase heavily ahead at full current rates. Seed oats continue in fair request and in a small way desirable qualities are selling above prices quoted.

White Oats, fancy feed.....	1 20 @ 1 25
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 17 1/2
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 22 1/2 @ 1 27 1/2
Black Russian.....	85 @ 1 15
Red.....	95 @ 1 20

### CORN.

Spot stocks are of very moderate volume, and are principally Eastern product. Prices continue at a high range, but no large quantities could be placed at figures now prevailing. With any material increase in offerings, values would speedily drop to lower levels.

Large White, good to choice.....	1 70 @ 1 75
Large Yellow.....	1 65 @ 1 70
Small Yellow.....	1 75 @ —
Eastern, in bulk (carload lots).....	1 55 @ 1 60

### RYE.

Values remain at a low range, there being little inquiry, either for shipment or local account.

Good to choice, new.....	77 1/2 @ 80
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### BUCKWHEAT.

Although there have been no noteworthy receipts or offerings thus far this season, local millers are very conservative in their expressed ideas of values.

Good to choice.....	1 50 @ 1 60
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### BEANS.

With new crop arriving rather freely, the market is naturally showing weakness. The majority of buyers are proceeding with more than ordinary caution, owing to values for most varieties having been lately on a high plane, in consequence of light crops during the past two seasons, with a very good shipping demand in the meantime. While the market is weak, the establishment of low or unremunerative figures for growers this season is not probable. A tramp steamer on the Cape Horn route cleared this week with about 7500 bags beans for New York.

Pea, fair to good, 100 lbs.....	3 50 @ 4 00
Small White, good to choice.....	3 40 @ 3 50
Lady Washington.....	2 20 @ 2 40
Pinks.....	2 30 @ 2 50
Bayos, good to choice.....	2 30 @ 2 50
Reds.....	3 00 @ 3 25
Red Kidney.....	3 50 @ 4 00
Limas, good to choice.....	4 40 @ 4 75
Black-eye Beans.....	3 00 @ 3 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

### DRIED PEAS.

There is no improvement to record in the condition of the market, and none likely to be experienced in the near future. Especially is this the case in regard to Green or Blue Peas, stocks of which are heavier than for a long time, owing to the recent large increase in acreage in the southern part of the State, mainly in Salinas section.

Green Peas, California.....	1 25 @ 1 75
Niles Peas.....	1 50 @ 1 60

### WOOL.

Market is ruling quiet, with no quotable changes to record in values. Of such wools as have been lately in most active request, viz.: good to choice Northern Fall, there are no offerings of consequence at this date. Heavy and defective Fall, and coarse Oregon and Nevada fleeces are most in evidence. These are held at generally unchanged values, but are not at present in request from either manufacturers or dealers. The steamer Hyades, sailing this week for New York, took 57,500 pounds wool as part cargo.

### SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

### FALL.

Humboldt and Mendocino.....	11 @ 12
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Northern Mountain, free.....	9 @ 11
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 1/2 @ 8 1/4
San Joaquin Lambs.....	7 1/4 @ 9

### HOPS.

The market is not showing much activity, nor is it noteworthy for firmness. Shippers might take hold in something like wholesale fashion at 10 @ 12c for good to choice, but growers generally are contending for better figures. For strictly fancy 13c is obtainable, possibly a little more on local account for some very favorite marks, but in the main offerings are not meeting with any marked attention or spirited competition in bids from either shippers or local dealers.

Good to choice, 1901 crop.....	10 @ 13
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### HAY AND STRAW.

The market for hay shows much the same condition as previously noted, being moderately firm at prevailing rates for good to choice qualities, and fairly steady for the lower grades. An occasional fancy lot of stable hay is commanding up to \$11.50, but this figure is realized more in a jobbing than in a wholesale way. Straw is commanding a moderate advance over recent rather low figures current.

Wheat, good to choice.....	8 00 @ 11 50
Wheat and Oat.....	7 50 @ 10 50
Oat.....	6 50 @ 9 50
Barley and Oat.....	6 00 @ 8 50
Barley.....	5 50 @ 8 00
Alfalfa.....	8 00 @ 10 50
Clover.....	5 50 @ 7 00
Stock.....	5 00 @ 6 00
Compressed.....	8 00 @ 11 00
Straw, 1/2 bale.....	25 @ 45

### MILLSTUFFS.

There have been fairly liberal receipts of Bran, and tendency has been to lower figures. Dealers are operating lightly, and refuse to purchase for future delivery at anything near current rates. Other mill offal was not in heavy supply, neither was it much sought after. Prices for Rolled Barley and Milled Corn remained about as last quoted.

Bran, 1/2 ton.....	19 50 @ 20 50
Middlings.....	20 00 @ 22 50
Shorts, Oregon.....	19 50 @ 20 50
Barley, Rolled.....	16 50 @ 17 00
Cornmeal.....	34 00 @ —
Cracked Corn.....	35 00 @ —

### SEEDS.

Business doing in Mustard Seed is of fair volume, values showing no quotable change. Trieste or Brown Mustard being in heaviest supply, inclines most in favor of buyers. A shipment of 126,000 lbs. went forward this week per steamer for Antwerp, and 110,300 lbs. went forward by water route for New York. Other seeds quoted below are ruling quiet, values for same showing no appreciable changes.

	Per ctt.
Flax.....	2 65 @ 3 25
Mustard, Yellow.....	3 15 @ 3 25
Mustard, Trieste.....	2 85 @ 3 00

	Per lb.
Canary.....	3 1/4 @ 3 1/2
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

### BAGS AND BAGGING.

Nothing of consequence doing in this line, and that the market will show any special life during the next few months is not probable. Values are quotably unchanged, but for the time being are largely nominal.

Calcutta Grain Bags, spot.....	7 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	7 @ —
Wool Sacks, 4 lbs.....	3 1/2 @ 3 3/4
Wool Sacks, 3 1/2 lbs.....	3 1/2 @ 3 3/4
Fleece Twine.....	8 1/2 @ —
Gunnies.....	— @ —
Bean Bags.....	5 1/2 @ 5 3/4
Fruit Sacks, cotton, three sizes.....	5 1/2, 6, 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/2

### HIDES, PELTS AND TALLOW.

The last quoted advance on Hides continues to be maintained, with demand fair. The inquiry for Pelts is not particularly active, but prices remain practically as before. Tallow is in good request for shipment and is readily commanding full current figures.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	11 @	9 1/2 @
Medium Steers, 48 to 56 lbs.....	10 @	8 1/2 @
Light Steers, under 48 lbs.....	9 @	8 @
Heavy Cow Hides, over 50 lbs.....	9 @	8 @
Light Cow Hides, under 50 lbs.....	9 @	8 @
Stags.....	6 1/2 @	—
Wet Salted Kip.....	9 @	8 @
Wet Salted Veal.....	9 @	8 @
Wet Salted Calf.....	10 @	9 @
Dry Hides.....	16 @	14 @
Dry Kip and Veal, 11 to 16 lbs.....	15 @	13 @
Dry Calf, under 4 lbs.....	17 @	15 @
Salted Horse Hides, large.....	2 75 @	—
Salted Horse Hides, medium.....	2 25 @	—
Salted Horse Hides, small.....	1 25 @	—
Dry Horse Hides, large.....	1 75 @	—
Dry Horse Hides, small.....	1 25 @	1 25 @

Dry Cols' Hides.....	50 @ —
Pelts, long wool, 1/2 skin.....	75 @ 1 00
Pelts, medium, 1/2 skin.....	50 @ 75
Pelts, short wool, 1/2 skin.....	30 @ 40
Pelts, shearling, 1/2 skin.....	10 @ 25
Deer Skins, best summer.....	35 @ —
Deer Skins, good medium.....	— @ 30
Deer Skins, thin winter.....	— @ 20
Elk Hides.....	10 @ 12
Tallow, good quality.....	5 @ 5 1/2
Tallow, No. 2.....	4 @ 4 1/2
Goat Skins, perfect.....	30 @ 37 1/2
Goat Skins, small.....	10 @ 20
Kid Skins.....	5 @ 10

### HONEY.

Values are ruling steady, with no very heavy spot offerings and a fair inquiry, more especially for Extracted. A sailing vessel, clearing the past week for England, took as part cargo 575 cases Extracted honey, and 453 cases Extracted went by sail for New York.

Extracted, White Liquid.....	5 1/2 @ —
Extracted, Light Amber.....	4 1/2 @ —
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7

### BEESEX.

No heavy quantities arriving, and stocks are given little or no opportunity to accumulate to any noteworthy extent. Values are without quotable change.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 25

### LIVE STOCK AND MEATS.

It the market for Beef there have been no special changes since last review, offerings keeping fully apace with requirements. Mutton market showed an easy tone, without any quotable decline. Large Lamb was in good supply and inclined in favor of consumers. Veal is arriving rather freely and market lacks firmness. Hogs sold at much the same figures as preceding week, but arrivals were rather heavy as compared with the immediate demand at prices ruling.

Beef, first quality, dressed, net 1/2 lb.....	6 @ 6 1/2
Beef, second quality.....	6 @ —
Beef, third quality.....	5 1/2 @ —
Mutton—ewes, 6 @ 7c; wethers.....	6 1/2 @ 7
Hogs, hard grain fed, medium.....	5 1/2 @ 6
Hogs, small, fat.....	5 1/2 @ 6
Hogs, large, hard.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	7 1/2 @ 7 1/2
Veal, small, 1/2 lb.....	7 @ 9
Veal, large, 1/2 lb.....	7 @ 9
Lamb, spring, 1/2 lb.....	7 1/2 @ 8

### POULTRY.

The market has been in decidedly unsatisfactory shape for the selling interest most of the time since last review. Continued free arrivals of Eastern poultry, in connection with hot weather and the opening of the wild duck season, combined to make a demoralized market for poultry. During the past few days, with cooler weather and lighter offerings, the market has shown a better tone, but in the matter of quotable values there has been no pronounced recovery.

Young Turkeys, full grown.....	13 @ 16
Hens, California, 1/2 dozen.....	3 00 @ 5 00
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	3 50 @ 4 50
Fryers.....	3 00 @ 3 25
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 50 @ 3 00
Ducks, old, 1/2 dozen.....	3 00 @ 3 50
Ducks, young, 1/2 dozen.....	3 50 @ 4 50
Geese, young, 1/2 pair.....	1 50 @ 1 75
Goslings, 1/2 pair.....	1 50 @ 1 75
Pigeons, old, 1/2 dozen.....	1 25 @ —
Pigeons, young.....	1 75 @ 2 00

### BUTTER.

Strictly choice to select fresh is not in heavy stock, and is being held at tolerably stiff figures, as high as 32c. being asked in a small way for some brands in high repute with the trade. For fresh which is not up to the top notch in every respect, however, there is little demand, most consumers being now on ice-house butter, of which there is no scarcity.

Creamery, extras, 1/2 lb.....	28 @ —
Creamery, firsts.....	24 @ —
Creamery, seconds.....	21 @ 22
Dairy, select.....	23 @ 24
Dairy, firsts.....	20 @ 21
Dairy, seconds.....	18 @ —
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Picked Roll, 1/2 lb.....	19 @ 21
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/2

### CHEESE.

There is a fair movement, but purchases are mostly for immediate needs, dealers not being disposed to stock up heavily at current rates. Supplies are not heavy of either domestic or Eastern product, the latter selling mainly within range of 13 @ 15c.

California, fancy flat, new.....	11 1/2 @ 12 1/2
California, good to choice.....	10 1/2 @ 11 1/2
California, fair to good.....	9 1/2 @ 10 1/2
California, "Young Americas".....	12 @ 13

### EGGS.

Prices for select fresh have been crowded further upward since date of last review, mainly for the purpose of



stock, supplies of the latter being heavy. Fresh eggs which showed mixed colors and irregular quality would not in some instances command as much as was asked for No. 1 eggs out of ice-house.

California, select, large, white and fresh. 39 @ 40  
California, select, irregular color & size. 32 1/2 @ 37 1/2  
California, good to choice store. 22 1/2 @ 27 1/2  
California, common to fair store. 18 @ 20  
Eastern, good to choice. 20 @ 25  
Cold Storage. 20 @ 25

## VEGETABLES.

Onions were in fair supply, with demand not very brisk, and the market inclined against sellers, although quotable values showed no marked reduction. Green Corn was in light receipt, mostly under choice, and will soon be a back number. Tomatoes are not arriving in very heavy quantity, but of other than strictly choice, there are more on market than required for immediate needs, still not enough to warrant canners taking hold. Lima Beans are in fair supply, but are bringing comparatively good figures. String Beans are mostly under choice and such sell slowly.

Beans, String, # lb. 2 1/2 @ 3 1/2  
Beans, Lima, # lb. 3 @ 3 1/2  
Cabbage, choice garden, # 100 lbs. 50 @ 75  
Cauliflower, # dozen 40 @ 50  
Corn, Green, # sack 50 @ 1 00  
Corn, Green, Alameda, # large crate. 75 @ 1 25  
Cucumbers, Bay, # large box. 25 @ 40  
Egg Plant, # box. 40 @ 50  
Garlic, # lb. 2 1/2 @ 3 1/2  
Okra, Green, # box. 50 @ 75  
Onions, Yellow Danver, # cental. 1 00 @ 1 25  
Peas, Sweet garden, # lb. 2 1/2 @ 3  
Peppers, Green Chile, # sack. 40 @ 50  
Peppers, Bell, # box. 50 @ 60  
Squash Summer, # small box. — @ —  
Summer Squash, Bay, # large box. 35 @ 50  
Tomatoes, # large box. 25 @ 40  
Tomatoes, # small box. — @ —

## POTATOES.

The market has continued slow since last review, and has been as a whole devoid of firmness, but lack of strength has been confined more especially to shipping grades, these being most in evidence, with very little inquiry from outside sections. Colorado is getting most of the Eastern business, her freight rates being about 25c. per cental lower than from here. Thus Colorado can realize \$8 per ton more than is asked here and retain the Eastern orders. Fancy qualities of Burbanks are bringing on local account tolerably firm figures.

Burbanks, Salinas, # 100 lbs. 1 15 @ 1 40  
San Leandro, in sacks, # cental. 1 00 @ 1 25  
River Burbanks in sacks, # cental. 50 @ 85  
Mission Garnet Chile, in sacks. 90 @ 1 15  
Sweets, new, # cental. 50 @ 90

## The Fruit Market.

## FRESH FRUITS.

The Apple market showed firmness for choice to select, especially for high grade 4-tier stock, with not much of this description offering on the spot or to arrive. Inferior and defective Apples were in liberal supply, and for this sort low prices ruled. Pears of the Winter Nelis and other late varieties are in moderate supply, with demand not very brisk, and only for best qualities can the market be said to favor sellers. Most offerings are too green and hard to be desirable for immediate use. Peaches are not making much of a showing, the season for this fruit being well advanced; such as are of desirable quality are being favored with a tolerably stiff market. Table Grapes sold to a little better advantage than preceding week, arrivals and offerings being on the decrease. Wine Grapes, on the other hand, ruled easier, due mainly to the quality of most offerings averaging poorer than at beginning of the season. Plums were in such light supply as to hardly warrant a quotation. Figs were not in large receipt, but were mainly of ordinary quality, and moved slowly at prices rather favorable to buyers. Berries ruled fairly steady, with supply and demand both of a slow order. Melons were in fair demand most of the week at generally unchanged values.

Apples, fancy, # 4-tier box. 1 25 @ 1 50  
Apples, good to choice, # 50-lb. box. 50 @ 1 00  
Apples, common to fair, # 50-lb. box. 35 @ 50  
Apples, green, # 50-lb. box. 35 @ 60  
Blackberries, # chest. 3 00 @ 5 00  
Cantaloupes, # crate. 55 @ 1 25  
Figs, # drawer and box. 30 @ 75  
Grapes, Cornechon, # crate. 60 @ 85  
Grapes, Isabella, # crate. 60 @ 85  
Grapes, Black, # crate. 40 @ 75  
Grapes, Muscat, # crate. 40 @ 75  
Grapes, Tokay, # crate. 40 @ 75  
Grapes, Zinfandel, # ton. 28 00 @ 31 00  
Grapes, White, # ton. 20 00 @ 26 00  
Logan Berries, # chest. 5 00 @ 6 00  
Nutmeg Melons, # crate. 40 @ 75  
Peaches, # box. 65 @ 1 00  
Pears, Winter Nelis, # 40-lb. box. 75 @ 1 25  
Pears, other kinds, # box. 40 @ 75  
Persimmons, # box. 50 @ 1 00  
Plums, # box. 40 @ 75  
Pomegranates, # box. 75 @ 1 00  
Prunes, # crate. 50 @ 1 00  
Quinces, # box. 50 @ 75

Raspberries, # chest. 5 00 @ 7 00  
Strawberries, Longworth, # chest. 6 00 @ 7 00  
Strawberries, Large, # chest. 3 50 @ 5 00  
Watermelons, # 100. 3 00 @ 15 00  
Whortleberries, # lb. 5 @ 7

## DRIED FRUITS.

The market for cured and evaporated fruits is quiet throughout, and in the main is lacking in firmness, not on account of any undue selling pressure, but owing to absence of shipping orders of noteworthy magnitude and apathy of Eastern and foreign buyers. The unsettled condition of the Prune and Raisin markets is said by some handlers to have considerable to do with the existing dullness, driving Eastern, foreign and local buyers out of the market temporarily, to await the final outcome, or the result of the straightening of the entanglements which have been lately playing more or less havoc with previous calculations and previously fixed values, to the detriment of the latter. Whatever the cause, or combination of causes, the fact remains that the market is decidedly slow. Holders are desirous of reducing stocks and do not appear averse to granting concessions, if by so doing transfers of noteworthy magnitude can be effected. To be in keeping with the general condition of the market, quotations are marked down about half a cent on Royal Apricots, Bartlett Pears, and evaporated Apples other than choice to fancy. In the absence of any wholesale trading of consequence, however, values for the moment are not well defined, leaving quotations largely nominal. To effect free purchases, full current quotations or close thereto would likely have to be paid for most kinds, while on selling pressure, in the present state of the market, inside quotations would probably be extremes to realize on most descriptions. The Prune Growers' Association is reported getting rid of some old Prunes on the 3c basis. Values for new Prunes are nominally on the 3 1/2c basis for the four sizes of Santa Claras.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime. 7 @ 7 1/2  
Apricots, Royal, choice, in sacks, # lb. 8 @ 8 1/2  
Apricots, Moorpark. 10 @ 12 1/2  
Apples, in 50-lb boxes, rings, pressed, fancy. 7 1/2 @ 8  
Apples, 50-lb boxes, rings, pressed, good to choice. 6 @ 6 1/2  
Figs, pressed. 5 @ 7 1/2  
Nectarines, # lb. 5 @ 6 1/2  
Peaches, unpeeled, fancy. 7 @ 7 1/2  
Peaches, unpeeled, choice. 6 @ 6 1/2  
Peaches, peeled, in boxes. 12 @ 14  
Pears, halves, choice to fancy. 6 @ 8 1/2  
Plums, Red and Black, pitted. 5 @ 6  
Plums, White and Yellow. 5 @ 6  
Prunes, 4 sizes, in bags, 3 @ 3 1/2c; 50-60s, 4 1/2 @ 4 1/2c; 60-70s, 3 1/2 @ 4c; 70-80s, 3 1/4 @ 3 1/2c; 80-90s, 2 3/4 @ 3c; 110s and less, 2 @ c.; these figures for 1901 crop; Old Prunes, 1/2 @ 1/2c. less.

## COMMON SUN-DRIED.

Apricots. 6 @ 6 1/2  
Apples, sliced. 3 1/2 @ 4 1/2  
Apples, quartered. 3 1/2 @ 4 1/2  
Figs, Black. 2 1/2 @ 3  
Figs, White. 2 1/2 @ 3  
Peaches, unpeeled. 5 @ 6  
Pears, prime halves. 5 @ 6  
Plums, unpitted, # lb. 1 1/2 @ 2 1/2

## RAISINS.

The previously quoted low values, as fixed by the Raisin Growers' Association, are still current, but the future is uncertain, there being a question whether the Association packers will receive the full quota allotted them for distribution at current figures, and they are accordingly cautious in making sales.

Two-crown London layers, per 20-lb box. \$1 25  
Three-crown London layers " " " " 1 35  
Four-crown, fancy clusters " " " " 1 75  
Five-crown, Dehesa clusters " " " " 2 50  
Six-crown, Imperial clusters " " " " 3 00  
Two-crown Standard Loose Muscatels, # lb. 3 1/2c  
Seedless Muscatels, # lb. 4 1/2c  
Three-crown Standard Loose Muscatels, # lb. 4 1/2c  
Four-crown Standard Loose Muscatels, # lb. 4 1/2c  
Bleached Thompson Seedless—  
Extra Fancy, # lb. 11 c  
Fancy, # lb. 10 c  
Choice, " " " " 9 c  
Standard, " " " " 7 1/2c  
Prime, " " " " 6 1/2c  
Thompson Seedless, # lb. 6 1/2c  
Sultanas, Fancy, # lb. 8 1/2c  
" Choice, # lb. 7 1/2c  
" Standard, # lb. 6 1/2c  
" Prime, # lb. 6 1/2c  
" Seedless, # lb. 5 1/2c

## CITRUS FRUITS.

A carload of new or intermediate crop Navel Oranges is announced on the way from Arcadia to this market, being the first car of the season. A few boxes, the fruit being rather green, were received from same point over a week ago. Last crop Valencia's are still offering, with as high as \$4.50 per box asked for choice. Lemons have been moving a little more freely than for several weeks preceding, but at no marked improvement in quotable rates, although average prices realized showed slightly in sellers' favor. Lime market was lightly stocked and firm for choice.

Oranges—Valencias, # box. 2 50 @ 4 50  
Lemons—California, select, # box. 2 50 @ 2 75

California, good to choice. 1 75 @ 2 25  
California, common to fair. 1 00 @ 1 50  
Limes—Mexican, # box. 6 50 @ 7 00

## NUTS.

There is very little doing in Almonds, and market presents an easy tone, although quotations remain without appreciable change. Walnuts outside of Association control are offering 1/4c. under quotations, but the quantity is comparatively small. Chestnuts are in moderate receipt and in fair request at the quotations noted. Values for Peanuts are being sustained at previously quoted range.

California Almonds, shelled. 18 @ 22  
California Almonds, paper shell, # lb. 12 @ 13  
California Almonds, soft shell. 10 @ 12  
California Almonds, hard shell. 6 @ 7  
Cal. White Walnuts, No. 1 soft shell. 9 1/2 @ —  
Cal. White Walnuts, No. 2 soft shell. 7 1/2 @ —  
Cal. White Walnuts, No. 1 hard shell. 9 @ —  
Cal. White Walnuts, No. 2 hard shell. 7 @ —  
Cal. Chestnuts. 12 1/2 @ 15  
Peanuts, California, fair to prime. 4 1/2 @ 5 1/4  
Peanuts, Eastern, hand-picked. 5 1/2 @ 6  
Pine Nuts. 5 @ 6

## WINE.

Much the same condition as previously noted continues to prevail in the wine market. Wholesale values for dry wines of last year's vintage are wholly nominal at 25 @ 30c. per gallon, with practically none offering at this date and little remaining in the hands of growers. The market for this year's dry wines will probably open at 20 @ 25c. per gallon. Prices could not well be lower, considering the comparatively stiff figures current for grapes. Large quantities of sugar have been shipped to some of the wineries, to make up for the deficit this season in the grapes, and at same time to reduce the average cost of the wine.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks. 111,036	1,803,774	1,696,174
Wheat, centals. 18,417	1,289,914	1,484,980
Barley, centals. 162,280	2,169,516	1,763,079
Oats, centals. 20,615	356,573	330,645
Corn, centals. 150	19,288	21,365
Rye, centals. 545	15,355	86,042
Beans, sacks. 31,621	121,458	106,787
Potatoes, sacks. 27,328	418,522	443,349
Onions, sacks. 9,048	95,863	85,828
Hay, tons. 3,764	45,820	66,901
Wool, hales. 3,328	26,266	13,455
Hops, bales. 584	2,299	3,541

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks. 96,980	1,385,032	831,028
Wheat, centals. 17,074	1,129,637	1,397,025
Barley, centals. 47,047	1,565,912	1,082,484
Oats, centals. 1,539	7,992	34,114
Corn, centals. 101	2,755	5,713
Beans, sacks. 101	919	49,402
Hay, bales. 341,316	233,621	233,621
Wool, pounds. 3,224	122,431	25,035
Honey, cases. 575	2,079	1,341
Potatoes, pack's. 604	11,086	23,240

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## California Dried Fruit at New York.

NEW YORK, Oct. 16.—Evaporated apples, common, 6 @ 8c; prime wire tray, 8 1/4 @ 8 1/2c; choice, 9c; fancy, 9 1/4 @ 9 1/2c.  
California Dried Fruits.—Market is quiet, with values in the main without quotable change.  
Prunes, 3 1/2 @ 7c.  
Apricots, Royal, 8 1/4 @ 12 1/2c; Moorpark, 9 @ 13c.  
Peaches, unpeeled, 6 @ 9 1/2c; peeled, 11 @ 15c.

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## Patrons of Husbandry.

### The State Grange.

As noted last week, the meeting of the State Grange in Petaluma was very satisfactory in point of attendance and spirit.

A LARGE-HEARTED GRANGER.—In his address of welcome Mayor H. P. Brainerd of Petaluma said: "I would like to call your attention to what one of our fellow townsmen, and your fellow Granger, has done for this city. About eight years ago, desiring to make the burdens of the poor and unfortunate of this city lighter, he deeded absolutely and without reservation 1000 acres of land, with all the improvements thereon, only stipulating that the income should be forever devoted to the destitute among us. This man who could, and did, made this munificent gift while alive and well, and long may he live to enjoy that feeling: 'that it is better to give than to receive.' The name of this great-hearted man is Harrison Mecham."

TRANSACTIONS.—The four days of the meeting were replete with transactions, reports and discussions, in which nearly all present took part. We note the following actions:

Worthy Past Master Johnston offered a resolution requesting the Governor to appoint as directors of the State Board of Agriculture only those who are practical agriculturists. Mr. Johnston also offered a resolution providing for the establishment on this coast by the National Department of Agriculture of a division of statistics, and same was adopted.

The report of the Committee on Co-Operation was read; it was very interesting and dealt chiefly with the Rochdale plan of co-operation, mutual fire insurance and co-operative fruit drying. A very interesting discussion on the subject of co-operation followed and the report of the committee was adopted.

Worthy Master B. Hayward of Pescadero Grange introduced a resolution pledging the members of the Order in this State not to employ any one who avows himself an anarchist, and the same was unanimously adopted.

The special committee on the proposed removal of the agricultural college from Berkeley to Menlo Park reported in favor of retaining the agricultural college at Berkeley and the report was adopted.

The third Sunday in June of each year was selected as Grange memorial day in this State.

A resolution heartily approving the farmers' institutes, as conducted under the auspices of the University of California, was adopted.

WOMEN'S WORK.—The presentation of the report of the Committee on Woman's Work was followed by a paper on "Fresh Air Work" by Sister Worthen, wife of the State Master.

Sister D. T. Fowler then read a paper on "The Value of the Reading Circle." Worthy Chaplain Sister Dewey reported what is being done by the Oakland Grange reading circle. Sister Emery of Oakland, wife of the new State Master, presented a very interesting

paper on "Why Women Should Support the Grange." Sister Cross of Oakland Grange followed with a paper on "Women in the Home and Grange."

ELECTION OF OFFICERS.—On Friday the Grange proceeded to the election of officers for the ensuing two years, with Worthy Past Master William Johnston presiding. The following officers were elected:

Worthy Master—C. W. Emery of Oakland.  
Overseer—H. C. Raap of Martinez.  
Steward—E. C. Shoemaker of Tulare.  
State Lecturer—J. D. Cornell of Sacramento.  
Assistant Steward—I. C. Steele, Jr., of Pescadero.  
Chaplain—Sister S. H. Dewey of Oakland.  
Treasurer—Daniel Flint of Sacramento.  
Secretary—Sister L. S. Brasch of San Francisco.  
Gatekeeper—N. H. Root of Stockton.  
Pomona—Sister King of Petaluma.  
Flora—Sister Salmon.  
Ceres—Sister H. Johnson of Petaluma.  
Lady Assistant Steward—Miss Delma Green of Courtland.  
Organist—Sister W. T. Irish of San Jose.  
Members of Executive Committee—W. V. Griffiths of Geyserville and Cyrus Jones of San Jose.

On the invitation of Sacramento Pomona Grange, the Grange decided to hold its next session in Sacramento.



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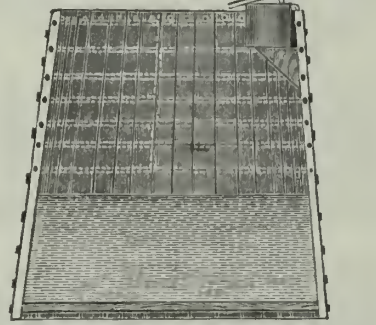


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5000 ft. of Pipe, good as new, at a bargain.  
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Assets Over \$7,000,000.  
The Only Stock Company on the Pacific Coast making a Specialty of **FARM BUSINESS.**  
Notes Accepted on Premiums Payable After Harvest.  
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**WIRE** GOODS, NETTING, DIPPING BASKETS.  
West Coast Wire & Iron Works,  
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Phylloxera-Resisting  
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**RIPARIA**  
Address **BUSH & SONS,**  
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**MAXWELL'S NURSERIES**  
NAPA, CALIFORNIA.  
Fruit, Shade and Ornamental TREES.

A GOOD STOCK OF—  
PETITE, IMPERIAL AND SUGAR PRUNES,  
Peaches, Apricots, Cherries, Pears, etc.  
A FEW THOUSAND ROOTED RUPESTRIS  
ST. GEORGE.  
J. MAXWELL, Proprietor.

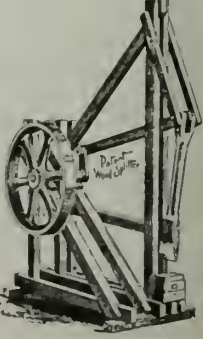
**NEW BLIGHT PROOF APPLES RAISED IN NEW ZEALAND.**  
A COMPLETE SET WHICH COVERS THE SEASON.  
Summer. Autumn. Winter.  
Marjorie Hay Hay's Midseason General Carrington  
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Lord Wolseley Sharp's Nonsuch  
Willie Sharp Tappake Carlton  
These varieties are all good: equal to Ribston Pippin, Gravensiel, Ben Davis, or any other well-known kinds. They are not "seedlings," but grafted trees on Northern Spy stocks, and perfectly blight proof. Prompt orders necessary.  
Price \$1.00 per tree. The set for \$10.00. Shlons 50 cents a foot, f. o. b. San Francisco.  
Distributing Agents: Address Dept. B.  
**J. W. WRENN CO., Ltd.**  
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**100,000 CHOICE CITRUS TREES**  
FOR SEASON 1902.  
Every horticulturist should have my 28-page illustrated catalogue, which tells all about citrus trees; the old sorts and the tested new sorts, also table for planting trees, sowing seed, etc. Your address on a postal will bring one. Address  
**R. M. TEAGUE, Prop.**  
**SAN DIMAS NURSERIES,**  
San Dimas, California.

**SEED WHEAT.**  
GRAND PRIX GOLD MEDAL  
PARIS EXPOSITION 1900.  
Grown on J. West Martin Ranch,  
Livermore, Cal.

IT is clean and of uniform grain.  
Has increased in gluten every planting in California. All small, light and immature end grains removed. Has been milled by Del Monte Milling Co., to whom we respectfully refer.  
FOR SALE BY  
**FRANK DALTON CO.,**  
123 CALIFORNIA ST., SAN FRANCISCO  
—OR—  
T. D. CARNEAL, Livermore, Cal.

**The Wise Wood Splitter.**  
Has Been Thoroughly Tested.  
Portable or Stationary, and does the work of 8 men, with axes.  
Manufactured by  
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**ALLIGATOR BOX PRESS**  
can bale 22 tons of hay in 10 hours or NO PAY.  
Circulars Free.  
J. A. SPENCER, 25 Williams Street, Dwight, Ills.



## THE VETERINARIAN.

### Anthrax in Oregon.

PORTLAND, Or., Oct. 7.—Anthrax, a terribly malignant and fatal disease, has attacked horses and cattle simultaneously in widely separated counties of Oregon, and stockmen are much alarmed at the probable outcome.

Early last week it was reported from Klamath county to Dr. William McClean that the cattle of southern Oregon were dying in numbers of an unknown disease, and especially in Klamath county.

The veterinary surgeon went to Klamath to investigate, and gave it as his opinion that the disease was anthrax. To make sure, he sent pathological specimens to Prof. Pernot, bacteriologist at the Government experiment station at Corvallis, for analysis. Prof. Pernot developed specimens and produced cultures of anthrax bacilli, leaving no room for doubt.

Wednesday a report came from Marion county that cattle there were dying from an unknown cause, and investigation showed that the disease was anthrax.

Yesterday it was reported that five horses had died in Benton county of the same disease. Anthrax attacks all species of stock, particularly cattle and horses. The progress of the disease, which is invariably fatal, is rapid, and the animal dies in from six hours to three days after being attacked.

Anthrax is contagious and the bacilli are propagated over widely separated districts by buzzards, which, after feeding on the carrion of animals that have died from the disease, carry the germs to watering troughs and animals become affected while drinking.

### A New Book on Animal Breeding.

Thomas Shaw, professor of animal husbandry at the University of Minnesota, has just written the most complete and comprehensive work ever published on the subject of which it treats. It is the first book of the kind ever given to the world which has systematized the subject of animal breeding. The leading laws which govern this most intricate question the author has boldly defined and authoritatively arranged. The book is intended to meet the needs of the teachers of animal husbandry, the students of agricultural colleges and all persons interested in the breeding and rearing of live stock. "Animal Breeding" is the one book upon this all-important subject. The thirty chapters in this book are as follows, the list giving some idea of this magnificent work, each chapter being in fact a comprehensive monograph on its subject: Breeding live stock, a standard of excellence, the law that like produces like, the law of principle of variation, the law of atavism, heridity of normal, abnormal and acquired characters, heridity of disease, the law of correlation, prepotency, in-and-in breeding, line breeding, fecundity, the relative influence of parents, the influence of a previous impregnation, intra-uterine influences, influences that affect the de-

## BLACK LEG ...VACCINE.

During the past two years our vaccines have been used on several thousand head of cattle in the worst infected districts of California and with the best of results, giving entire satisfaction and proving an exceedingly profitable investment to the stock owner. Every lot is tested and found reliable before a single dose is put on the market.

Write for literature and testimonials.

The Cutter Analytic Laboratory,  
Bacteriological Dept. FRESNO, CAL.

### WANTED.

About two carloads of healthy, thrifty Calves or Yearlings.

Address, giving particulars of breed, age, condition, price, and shipping point,

D. W. LEWIS, SANGER, CAL.

termination of sex, nutrition, quality in live stock, the coat and influences which affect it, the influence of artificial conditions, early maturity, pedigree, animal form as an index of qualities, selection, cross breeding, improvement through grading, forming new breeds, the influence of environment, castration and spaying, mating animals. The book contains over 400 well-printed pages. It can be had for \$1.50 post paid by ordering through the PACIFIC RURAL PRESS.

## Breeders' Directory.

### HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER SAXE & SON**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**J. H. GLIDE**, Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A.J.C.C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

### POULTRY.

**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**SANTA TERESA POULTRY FARM**, Eden Vale, Santa Clara Co., Cal. Illustrated catalogue with show record for 1900, free. Agents Eclipse Aluminum Leg Bands; sample 2 cts.

**FOR THOROUGHbred FOWLS** in small lots, address Cottonwood Farm, Pleasant Grove, Cal.

**MEAT MEAL**, Best quality. Lowest price. A. Warren Robinson, Napa, Cal.

**BRONZE TURKEYS**. Ed. Hart, Clements, Cal.

### SWINE.

**W. R. McCASLIN**, Cosumnes, Sacramento Co., Cal. All breeder of Poland-China Hogs.

**BERKSHIRE AND POLAND-CHINA PIGS**. C. A. Stowe, Stockton.

**DR. R. CAU' H**, Carpinteria, Cal. Registered Berkshire Hogs for sale.

**P. H. MURPHY**, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**CHAS. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

**20 FINE BERKSHIRE PIGS FOR SALE**. Chas. C. Perkins, Sacramento, Cal.

### BREEDERS' SUPPLIES.

**POULTRY** supplies of all kinds. Send for my new price list and booklet, "HOW TO FEED FOWLS FOR PROFIT." CROLEY, 508 Sacramento St., San Francisco, Cal.

## FANCY POULTRY.

We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Publishers of the Pacific Coast Poultryers' Hand-Book and Guide. Price 40c, postpaid.

**PACIFIC INCUBATOR CO.**,  
1317 Castro Street, Oakland, Cal.

### PIGS FOR SALE.

Nine Four-Month Registered Berkshire Pigs.  
\$10 EACH, OR \$75 FOR THE NINE.  
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## Angora Goats FOR SALE.

Inquire of GEO. W. GIBBS CO., 33 Fremont St., San Francisco, Cal.

## C. P. Bailey & Sons,

San Jose, California,

Importers and Breeders of **ANGORA THOROUGHbred GOATS**.

Flock founded on our own selections from first importations into the United States.

The only New Blood received in the United States for 25 years is from our two importations FROM SOUTH AFRICA, and

OUR RECENT IMPORTATION FROM ASIA MINOR. Don't Buy Doubtful Stock.

100 Fine Registered Yearling Bucks for Sale. Catalogue Free. A neat booklet on the culture of Angora Goats for 25 cents, post paid.



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The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes. Made by STANDARD OIL CO.

## NOW IS THE TIME TO BUY! Nothing Reserved

Every Horse on the well-known **GABILAN STOCK FARM**, the property of Jesse D. Carr, Salinas, is offered for immediate sale at a bargain.

Mr. Carr wishes to be relieved of the care of managing a stock farm, and has thrown on the market about 50 head of high-class Brood Mares, selected for their breeding and individuality, nearly every one of them being standard, and it is rarely that such an opportunity is offered to buyers to secure high-class stock at a bargain. In addition to Brood Mares, Mr. Carr has about 50 youngsters from weanlings to three-year-olds, out of these great mares and by the best stallions on this Coast. Many of them are entered in the Pacific Breeders' Futurity Stakes, the Stanford Stake and the Occident Stake, and those that are old enough are broken, many of them showing speed that warrants the assumption that they will be great race horses.

A list of all of the stock on the ranch is being prepared. The stock can be seen at the ranch, and lists and further information can be had by addressing

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Single Blacklegine } Vaccine ready for use.  
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### FOR POULTRY.

Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are high. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

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## HOLSTEIN CATTLE.

SLEEPY HOLLOW RANCH, SAN ANSELMO, MARIN CO., CAL.

ALL THE LEADING FAMILIES OF THE BREED.

Every Sire directly imported from Herds of the Greatest Eastern Breeders.

Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams. Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.

## STATE FAIR VISITORS

knew good pigs when they saw them and our sales were much larger than in any other year, which has reduced our stock to a small number.

We have a few pigs ready to ship and other litters coming on. We won a large number of premiums which show the character of the herd. We still claim to have the best large herd on the coast and are adding new animals when we find good ones.

Persons wanting good pigs should get in their order early to get a choice of litters.

Correspondence solicited.

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## HUMBOLDT STOCK FARM,

JOSEPH MARZEN,

PROPRIETOR.

Breeder of **SHORTHORN AND HEREFORD CATTLE**.  
Young Stock for Sale. **LOVELOCK, NEVADA.**



### Cyanide of Potassium Fumigation Effective With Household Pests.

One of the most violent poisons known to man is hydrocyanic acid, which may be obtained from cyanide of potassium. The latter is an equally dangerous article, and should be handled with great care. It should not be touched with the fingers, it should not be sniffed, and special pains should be taken not to let even a small particle get into a cut or wound. Moreover, it is not well to let the gas which is generated by potassium cyanide get at articles of food, lest it contaminate them. Still another precaution to be observed is not to have a light around where the vapor is, as when it constitutes more than one-quarter of a mixture with air it is explosive.

But, properly handled, this substance is wonderfully fatal to vermin. Experiments by Dr. W. R. Beattie of the Division of Botany in the Department of Agriculture, Washington, shows that where a room is fumigated by this means and the gas kept there for several hours—over night—it will destroy mice, cockroaches, flies and other insects. It is recommended that the space of the room be computed, and one-tenth of a gram of cyanide be used for each cubic foot. A vessel of glass or stoneware should be provided, holding a gallon for every 2000 cubic feet. Use several, if necessary, and run a cord from each to a common point outside the door, where they may be all temporarily fastened. Weigh out the cyanide—200 grams for 2000 cubic feet—tie it in a paper bag, and suspend it by the cord over the jar. Use gloves meanwhile. Put in each jar a scant pint of water and a full pint of sulphuric acid for every 2000 cubic feet. Add the acid to the water slowly and stir. The mixture will grow very hot. Dr. Beattie gives these further instructions:

Place the jars beneath the bags of cyanide, spreading a large sheet of heavy paper on the floor to catch any acid that may possibly fly over the edge of the jar when the cyanide is dropped, or as a result of the violent chemical action which follows. Close all outside openings and open up the interior of the apartment as much as possible, in order that the full strength of the gas may reach the hiding places of the insects. See that all entrances are locked or guarded on the outside to prevent persons entering, then leave the building, releasing the cords as you go. The gas will all be given off in a few minutes, and should remain in the building at least three hours.

When the sulphuric acid comes in contact with the cyanide of potassium the result is the formation of sulphate of potash, which remains in the jar, and the hydrocyanic acid is liberated and escapes into the air in the form of gas. The chemical action is so violent as to cause a sputtering, and frequently particles of the acid are thrown over the sides of the jar; this may be prevented by supporting a sheet of stiff paper over the jar by means of a hole in the center, through which the cord supporting the cyanide of potassium is passed, so that when the cord is released the paper will descend with the cyanide and remain at rest on the top of the jar, but will not prevent the easy descent of the cyanide into the acid. The weight of this paper will in no way interfere with the escape of the gas.

At the end of the time required for fumigation the windows and doors should be opened from the outside and the gas allowed to escape before anyone enters the building. A general cleaning should follow, as the insects leave their hiding places and, dying on the floors, are easily swept up and burned. The sulphate of potash remaining in the jars is poisonous and should be immediately buried and the jars themselves filled with earth or ashes.

**GREEN FEED.**—Lodi Sentinel: The earliest feed in years covers the ranges in the southeastern part of this county and in Stanislaus county. Wild grass stands over 4 inches high and gives promise of good feed all winter.

### Horse Meat in Vienna.

The comparatively high prices obtaining in Vienna for beef, mutton and pork put these meats beyond the daily reach of the poorer classes, who are most taxed by hard labor and are obviously in need of strength-giving food. Nearly half a century ago the experiment of putting horse meat on the market was made for the first time in Austria. A governmental decree of April 20, 1854, gave legal permission to cut up and sell horse meat as an article of food. During the rest of that year and in 1855 943 horses were slaughtered for food in Vienna. The number rose in 1899—the last year for which statistics are obtainable—to 25,640 head. The statistics of the number of horses and donkeys slaughtered for food in Vienna during the five years from 1895 to 1899, inclusive, and of the receipts and expenses for their slaughter, are as follows:

YEAR.	Animals slaughtered.		Abattoir receipts and expenses.	
	Horses.	Donkeys.	Receipts.	Expenses.
1895...	21,095	71	\$2800.28	\$1166.82
1896...	21,930	82	3147.60	1077.96
1897...	22,684	66	3352.17	824.73
1898...	24,099	44	.....	.....
1899...	25,646	58	.....	.....

The price of horse meat ranges, per pound of fore quarter, from 5 to 8 cents; hind quarter, 6 to 9 cents; choice cuts for steak and roast, from 5 to 11 cents; the same cuts in beef averaging from 20 to 24 cents a pound. The horse meat is also worked up into sausages, and as such sells at correspondingly low prices. The horse meat butcher shops, of which there are no less than 185 in Vienna, present a clean and attractive appearance, and are in no way distinguishable from the shops where the usual kinds of meat are sold, save by the signs announcing their specialty. Restaurant keepers who serve horse meat must designate this fact in special column on the bill of fare offered to patrons.

The regulations as to the proper condition of the horses slaughtered are very stringent and carefully enforced. In the shops where the horse meat is sold a certificate of inspection must lie open for all to read. As in other butcher shops, the prices of the various cuts per kilogram must be stated on a signboard. In some of these shops donkey meat is also offered for sale, and this fact must be announced in a similar manner.

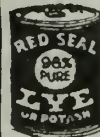
**TO CONTROL HONEY CROP.**—Los Angeles Express: Honey making in southern California has attained such proportions that steps have been taken for the formation of an association to control the entire output of the Pacific coast. A meeting will be held at the Chamber of Commerce Oct. 21 and 22 for the purpose of effecting an organization of the producers and all directly interested in bees and the bee industry. It is proposed to incorporate under the name of the Pacific Honey Producers, with a capital stock of \$500,000. This is to be divided into \$5 shares, and the object of the association is to establish and to maintain a uniform system of product, package, grade, storage and marketing of the honey. A special label will be adopted and honey will be branded with the association seal. Membership in the association is to be extended to comb and extracted honey producers, merchants, brokers and all firms dealing in honey and apary supplies. A colony of healthy bees in modern frame two-story hives purchases one share of stock, provided the owner will take a share for each colony he owns. These shares will be non-assessable and non-interest bearing. All the producers will bind themselves to market their crop through the association.

### Prune Dip.

"Greenbank" Pure 100% Caustic Potash and 98% Powd. Caustic Soda.

T. W. JACKSON & CO.,  
Sole Agents, - No. 123 California Street,  
SAN FRANCISCO, CAL.

## DIRECTIONS FOR SUCCESSFUL OLIVE PICKLING



PLACE olives in solution composed, 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove tartness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 6 oz. salt to gallon water for 7 days. Put in brine 10 oz. salt to gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles scalded in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vator cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

## YOU MUST USE RED-SEAL-LYE

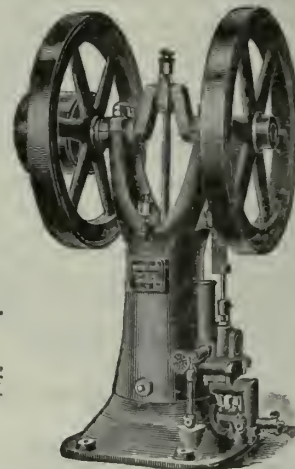


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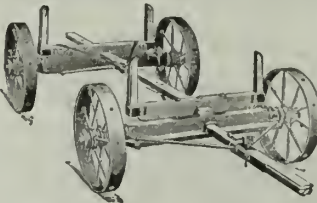
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Deep Well Pumps, Power Pumps, Etc.,  
Also Marine Engines, Ship and Steamboat Work,  
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FOR USE IN FIELD AND ORCHARD.

A Good Low Down Truck for the Fruit Grower.

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Canopy tops; only a few left. WE GUARANTEE 'EM. They are the kind that sell for \$135.00. You can have 'em this week for \$85.00. We have everything on wheels: Buggies, Carriages, Runabout Wagons, Freight and Farm Wagons, etc. WRITE OR CALL.

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## SANTANA & PERRY, WOOL COMMISSION MERCHANTS.

WOOL, HIDES AND PELTS Advances Made on Consignments.

Agents for SCABCURA SHEEP DIP—THE PURE NICOTINE OF TOBACCO. Directions on every package. A sure cure for scab and ticks on sheep, also sure destroyer of parasites on fruit trees. Invaluable in the nursery.

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## \$50.00 RANGE FOR \$25.00

TO INTRODUCE THE

WILLARD STEEL RANGE into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/4 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Dept. 8. Will ship C. O. D. with privilege of examination.





THE APIARY.

Southern California Honey Crop.

G. W. Broderick protests in the Bee Journal against exaggerations of the year's honey crop. Every season we are informed, he says, from outside sources (and sometimes within), that southern California will have an enormous crop of honey, and it matters not whether the conditions are favorable or not (last year as an illustration), with the consequent result prices are established before the honey is ready for the market and the amount produced is unknown. This year has not been an exception in this respect to the past, but that which has lent additional interest and more than all else to depress the market, has been the action of some within our ranks. The object, of course, is self-evident, for the circulation of the rumor of a large crop has a depressing influence upon the bee keeper who is forced to sell, and when the middleman quotes a well-known bee keeper as authority, it lends force to the statement; and as the former has no means at hand to know of the vast quantity of honey that has been shipped to the United States from Cuba, Hawaii, and Puerto Rico, (this information is supplied by the buyer or go-between), knowing not whether it is true or false as to state of market, etc, he quietly submits and sells for the price offered.

We all know beyond question, that at the beginning of the season we had less than one-half of the bees to produce a crop with than four years ago, and yet the statement has gone forth that we produced as much, and more, than we did four years ago. I know beyond question that we have many honest buyers, and I know of bee keepers who have been aiding these men in a legitimate way, but when men from our own rank circulate statements with the express view of depressing the market, and thereby affording them a profit, I think it is time the California bee keepers were warned against their practices, and it is this which prompts this article.

While I am not disposed to pose as authority in regard to this year's crop, information from some of our leading bee keepers, and others sources, indicates that we have produced about 150 carloads of honey, all told. Over half of this has been marketed. Comb honey has been produced in limited quantities, due to unfavorable conditions, and this has nearly all been disposed of. The remainder of our product is in the hands of men who can hold it indefinitely.

STATE OF OHIO, CITY OF TOLEDO, ss.  
LUCAS COUNTY,

FRANK J. CHENEY makes oath that he is senior partner of the firm of F. J. CHENEY & CO., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1896.

SEAL  
A. W. GLEASON,  
Notary Public.

Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75c.  
Hall's Family Pills are the best.

SUCCESS WITH BEES.

\$20.00 worth of Honey per colony, 20 tons made with 100 colonies. Many openings in a profitable industry. A map of the Honey-yielding locations of California with a year's subscription to the Pacific Bee Journal \$1.00, single copy 10c. Published at Los Angeles, Cal.

The Fresno Scraper.

3 1/2 - 4 - 5 Foot.



FRESNO AGRICULTURAL WORKS.  
FRESNO, CALIFORNIA.

The Peanut Crop in Orange County.

According to the Santa Ana Blade, Mr. C. E. Utt, a leading grower, says that the peanut crop will not be a glittering success this season, although there will be a greater acreage to harvest this year than last. But the yield will not be so much to the acre this year and the profits from peanut farming proportionately less in consequence, and the peanut grower who last season packed away in his jeans the net returns from forty 40-pound sacks to the acre will this year put by, after paying expenses, about 25% less. The reason given for this state of affairs is that the ground in many instances was not thoroughly soaked before the peanuts were planted, and the hot spell in last month played havoc with the crop by drying out the land and depriving the vines of proper sustenance, and this at a time when no after application of moisture could repair the loss. But Orange county's goober crop will be no small item of income nevertheless, for, according to Mr. Utt's figures, there are in the neighborhood of 350 acres of peanuts planted in the whole county, and these will yield probably thirty sacks to the acre, which, at an average of thirty-eight pounds to the sack, foots up the total of 399,000 pounds of peanuts. Peanuts usually command in the market about 5 cents a pound, and at that price the gross returns for the county's crop will figure out \$19,950. Of this total acreage Tustin and Orange have over two-thirds, and Mr. Utt himself owns 125 acres—the largest acreage owned by any one man in the county.

Last year Mr. Utt had seventy-five acres in peanuts, and his success was such that he added fifty acres this season; but because of untoward conditions, the yield from his total acreage this season is not expected to be in excess of that of last year.

New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING SEPT. 24, 1901.

- 683,167.—REVERSIBLE RATCHET—L. Adams, Santa Rosa, Cal.
- 683,015.—GANG SAW—W. F. Barnes, Klamathon, Cal.
- 683,375.—FURNACE—C. Bishop, S. F.
- 683,419.—URINAL SCREEN—E. E. Burson, Los Angeles, Cal.
- 683,248.—MOLDING AND HOOK—H. O. Chase, S. F.
- 683,389.—PIPE MOLD—B. R. Davison, Duarte, Cal.
- 683,391.—TANK—B. F. Ellis, Berkeley, Cal.
- 683,172.—BLOCK SIGNAL SYSTEM—S. L. Foster, S. F.
- 683,394.—VALVED PISTON—S. M. Fulton, Galt, Cal.
- 683,043.—HAY STACKER—A. F. Haynes, Dufur, Or.
- 683,175.—BED BOTTOM SUPPORT—J. Hoey, S. F.
- 683,283.—TRACTION APPARATUS—A. A. Honey, Tacoma, Wash.
- 683,284.—BRAKE—A. A. Honey, Tacoma, Wash.
- 683,290.—JACK—J. A. Johnson, Hoquiam, Wash.
- 683,301.—NOZZLE—D. F. Leahy, S. F.
- 683,317.—HOSE NOZZLE—J. McBoyle, Oakland, Cal.
- 683,069.—TABLE—Charlotte E. Pugh, Oakville, Or.
- 683,331.—SUGAR CANE LOADER—A. H. Schierholz, S. F.
- 683,150.—CARTRIDGE PRIMER—I. Silvis, Grafton, Cal.
- 683,149.—FLOUR SIFTER—E. B. Siskron, Seattle, Wash.
- 683,188.—TREATING LIME—F. N. Spear, Los Angeles, Cal.
- 683,083.—FRUIT DRIER—Thomas & Thompson, Jefferson, Or.
- 683,361.—DIVING APPARATUS—J. L. Watson, Los Angeles, Cal.

FOR THE WEEK ENDING OCT. 1, 1901.

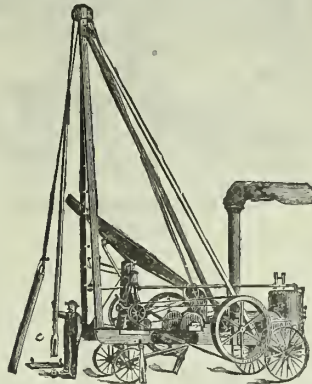
- 683,547.—CONCENTRATING BELT—W. F. Bowers, S. F.
- 683,590.—SAW MILL—G. W. Brower, Portland, Or.
- 683,844.—ORE SAMPLER—A. C. Calkins, Los Angeles, Cal.
- 683,789.—CAN TESTING MACHINE—W. S. Case, Haywards, Cal.
- 683,853.—PHOTO ALBUM—S. Forbes, Berkeley, Cal.
- 683,747.—FOOT WARMER—F. H. Gotsche, S. F.
- 683,764.—NUT LOCK—H. R. Hopgood, Mentone, Cal.
- 683,779.—VELOCIPEDE—J. Lund, S. F.
- 683,613.—GOLD SAVING APPARATUS—A. Marcotte, Gaston, Cal.
- 683,656.—SECURING CAMS ON SHAFTS—E. H. Moyle, S. F.
- 683,884.—WATER SEAL TRAP—T. F. Payne, Spokane, Wash.
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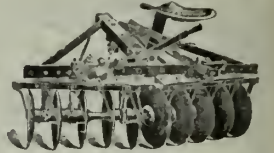


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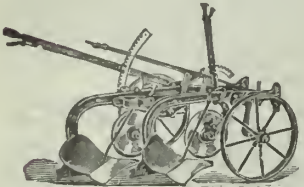
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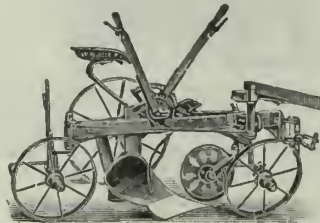
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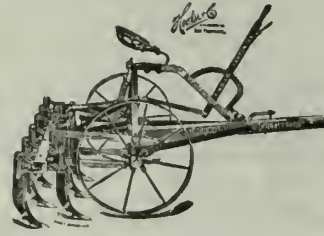
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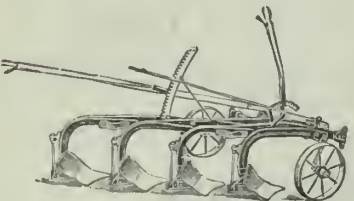
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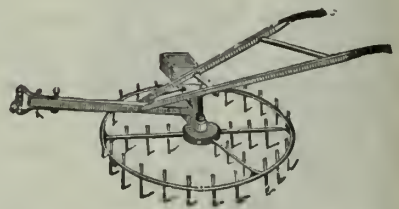
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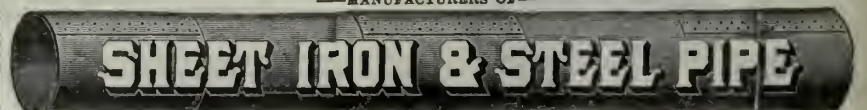
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 17.

SAN FRANCISCO, SATURDAY, OCTOBER 26, 1901.

THIRTIETH YEAR.  
Office, 380 Market St.

### What Arizona Cows Are Doing.

We have taken occasion in an earlier issue to speak appreciatively of the work of the Experiment Station of Arizona. For direct value of its researches, and the style in which they are set forth in its bulletins, the Station is entitled to high rank. Without making definite comparisons, which would be odious, we can but say that the work done in that young and sparsely settled Territory, and under rather unfavorable conditions perhaps, seems in our notion superior in choice of direction, as well as in methods and results, to the work accomplished in some of the oldest and most populous States. Arizona is entitled to credit for adding to the credit of the farthest west in research and experimentation.

We have on another page of this issue the results of a well-planned investigation of the production of the dairy herds of the Territory. It is calculated to attract much attention and to exert a wide influence because it includes such large numbers of animals kept under actual producing conditions such as prevail in commercial dairy practice. The results are confirmative of the data secured in many earlier tests and records of station herds, but they will strike the dairy reader as more intelligible to him

much credit upon their keepers to be content with such a narrow margin or to get it by skimping the cow below what is fairly due to her in care and feeding. If it be true then that the men share some of the blame, because nearly one-third of these herds did not pay, the lesson of the test becomes even more widely suggestive than if the quality of the cows alone was shown. It is often the man behind the cow of



Cow No. 1. Record 7945 Pounds of Milk. 352 Pounds of Butter Fat.

### Rotation of Crops.

We had recently an interesting statement of the advantage of rotation of wheat growing and grazing as demonstrated by the experiments of Mr. Carneal in the Livermore valley. Just what happens by this alternation is like that reported, after full investigation, by the Minnesota Experiment Station. Prof.

Snyder of that station has been for many years examining the soils of Minnesota, with a view of determining the effect of continuous wheat growing upon soil fertility. In Bulletin No. 70, just issued, he presents some of his conclusions, which are outlined in the Orange Judd Farmer. He found that when wheat was grown continuously upon the same soil for eight years there was a loss of 1700 pounds of nitrogen per acre. Of this 300 pounds were utilized as plant food and 1400 pounds lost by the decay of vegetable matter in the soil and liberation of nitrogen. During these eight years there was a loss of over 21% of the total nitrogen of the soil, equivalent to a loss of 175 pounds per acre in addition to that used as plant food. When wheat was grown in rotation with clover and oats, five crops of wheat being removed during the eight years, larger yields were secured and the total loss of nitrogen was reduced to 800 pounds. When



Cow No. 2. Record 7978 Pounds of Milk. 348 Pounds of Butter Fat.



Cow No. 3. Record 8726 Pounds of Milk. 319 Pounds of Butter Fat.

Three Good Arizona Cows—The Best of a Large Number Tested by the Arizona Experiment Station.

and more convincing generally than are tests made under station environment. They can no longer claim that the wide variation in value between the best and the poorest animals, when few are included in the test, may be due to exceptional conditions, and are therefore possibly misleading. In his Arizona test Mr. True included 101 separate herds, mostly of quite small strings of cows, it is true, but still under different ownership and handling, and including all sorts of conditions. Of course, to a certain extent, it may cease to be a test of cows and become a test of men, because, to be perfectly fair to the cows, all should be treated alike as they are in the conventional station tests. But the common man has a delight in a test which takes things as they run in actual practice, and this he certainly has in this Arizona investigation. Of these 101 herds, 33 failed to pay, according to a theoretical standard of \$32 as the cost of a cow per year. It is likely that some of the cows were kept for less than that amount, and consequently yielded a profit, but it does not reflect

whom the dairy reformer is really in pursuit. Let the cow kick him; the reformer cannot.

We have on this page the portraits of three of the cows which made the highest records in the Arizona experiment, and they must be conceded to be of very good practical character. The best cow in the forty-two included in the test, judging by the weight of butter fat, is evidently a dehorned Jersey. The next in rank by the same standard is a grade Jersey, while the third in rank is a Shorthorn; but the last, though losing by the creamery standard of butter fat, would be for some other uses superior as giving about 100 gallons more milk of fair richness. The tables given on another page give ample data for comparisons and computations, which dairymen can make for their own points of view.

THE Florida orange crop this year is to be one and a quarter to one and a half million boxes according to different estimates. The growing is being concentrated in south Florida out of the blizzard belt.

corn was grown with clover and oats and farm manure was used, the loss was reduced to 450 pounds per acre. When oats and barley were grown continuously the loss was nearly as great as when wheat was grown continuously. On the land devoted to wheat exclusively there was an annual loss of over 200 pounds per acre of humus; but when clover and oats were grown part of the time there was no material loss of humus. The most marked effect, due to the loss of humus, was the changed physical condition of the soil, causing it to be less retentive of moisture, lighter in color and heavier in weight. When bare summer-fallowing is practiced a heavier loss of nitrogen occurs than when wheat is grown continuously. Summer-fallowing rapidly exhausts the soil. In summing up the matter, Prof. Snyder notes that wheat is not an exhaustive crop when grown in rotation, but when it is grown continuously the fertility of the land is considerably impaired. Old wheat soils readily recuperate when some humus-forming material is returned to the land, such as farm manure.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, October 26, 1901.

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## The Week.

Weather affairs are becoming unsettled as the week advances. A flush of heat which exceeded recent records at some points has been followed by showers, and on Wednesday as we go to press the sky has cloud effects rivaling the summer skies of the East and betokening the arrival in earnest of the California autumn-spring season. Everything is now about as nearly ready for water as it is likely to be, so let it come, that the activities of the season may advance and the growth of feed proceed. The heat and north wind have dissipated the moisture of the earlier rain, and the ground has become too dry in some localities for either plowing or growth of grass. Nearly every one will be glad to have a new moistening, though the gathering of some late fruits needs a little more of the delightful weather which has marked the greater part of the October days this year.

Wheat is stiffening a little. Reports are being circulated of crop injuries in Argentine, but the chief local factor is the reduction in the local freight rate. Two cargoes of wheat went out this week. Spot prices are little changed, but futures have been higher, though receding a little as we go to press. Barley is steady, with better inquiry and a brisk outward movement—8000 tons going to Europe, including 1900 tons of Chevalier, which brightens that grade somewhat. Oats are steadily held, but movement is slow. Corn is unsettled; new corn is going at less than recent figures, but choice old is still commanding full figures. There are large bean receipts, thought to be largely covered by contracts; the market is rather weak; there are few changes, but downward when they are made. Bran is weak, but not much lower, as stocks are moderate so far; experts look for a sharp drop any day. Hay is firm and active and the best grades higher. All fresh meats are unchanged. Receipts of hogs are fairly large, but they are all taken. Butter is weak, though trying to hold up well; even the best grades are weak and new butter seems to be off quality largely. Mild new cheese is high and not much of that description to be had; Eastern cheese markets are high. Eggs are of all prices, according to grade; a few strictly fresh sell well, but all others are slow. The poultry market is in poor shape except for small broilers. There is too much Eastern stock, too much hot weather, and game is showing up also. Potatoes are a little better and shipping has been resumed, though at less price. Onions are steady, with moderate offerings and fair demand. Fine apples are selling well. A few late peaches do fairly, and many poor pears are offered. Table and wine grapes are rather weak, though strictly choice wine grapes would bring full figures. New Navel oranges are in

moderate quantity and steadily held, but the demand is not active. Lemons are steady and quiet with only moderate sales. Dried fruit is slow, but rates are held up well. Old prunes are available at 2½c basis and new at 3½c, but there is little movement so far. Raisins are held at two sets of prices and many are going at the lower rate. The quality of the new crop is good. Almonds are weak and walnuts firm, and promise to clean up well. Honey offerings are small, but the market is weak though unchanged. Hop buyers are doing little, but many northern hops are going to the East and Europe, either on consignment or contract. Wool is inactive here. Country markets for fall clip are still being held and buyers pay attention to them. It looks as though all kinds of wool would make a cleanup.

So it seems that the overland shipments of apples and grapes are likely to bring this season's total eastward movement of deciduous fruits nearer to last year's figure than was thought possible when the midsummer fruits dropped away so much. The total for last week was 185 cars, which is nearly double that for the corresponding week of last season—98 cars. The total for the present season to date, of deciduous orchard fruit and grapes, is 5856 cars, against 6001 for the last season to the corresponding date, a decrease of only 145 cars. The apple shipments are noticeably large this month, indicating a lively Eastern demand for this fruit and a willingness to pay a high price for the California product. The Eastern apple crop is exceptionally short this year, which is going to help us with our surplus dried fruits as well as with the apples which are now going forward.

A product of the success of the southern California fruit exchanges is seen in the fact that the beekeepers of the south organized on Tuesday of this week the "Southern California Honey Association." The purpose of the organization is to handle the honey industry systematically and to undertake the marketing of the honey produced in southern California. Local associations are to be formed in every community where honey is produced and these associations are to elect stockholders in the Southern California Association. According to the reports from the Census Office, the output of honey and wax in this country is set at 20,000,000 pounds, and at least one-third of this is from California. The price of honey in the comb this year has been from 10 to 12 cents, which is a good price, and the price of extracted honey, the principal output of southern California, is 3½ to 6 cents. The Southern California Association will consider the advisability of forming an organization of bee men national in scope along commercial lines.

The activity in veterinary affairs promises much for the future health of our live stock. The energy of the swine growers in assembling to meet their trouble promises to accomplish much in checking the dread disease. There is plenty of machinery to handle these diseases for the protection of the stock and the incidental assurance to people of wholesome food. The people must take the initiative in calling for the information they need and in calling the attention of executive officers to the occasion for their action. How this can be done is shown in the paper of Dr. A. R. Ward of the University, which is published in this issue. The energy with which prophylactic preparations are being pushed by the manufacturers is also indicative of the interest which has been aroused and hopeful of a higher health percentage, consequently more certain profit in stock growing. It is time we were awakened on the subject. We have slept upon it until no alarm seemed effective. It will work out all right from this time onward.

The new arrangement to have all citrus fruits show the locality whence they came is to be enforced. L. J. B. Spruance of Los Angeles county has been appointed inspector of citrus fruit shipments by Governor Gage, in accordance with the law passed by the late session of the Legislature, which provides that all fruit shippers must brand their names and location on all their packages of fruit. This will be a comfort to growers both north and south, for each believes that the other is made at times to sail under false colors by the orange shippers. In the future we shall have this thing straight at least.

## QUERIES AND REPLIES.

### Efforts for Better Agricultural Fairs.

TO THE EDITOR:—The Province of Ontario is spending nearly \$400,000 per year in the promotion of agricultural associations. Most of this money is spent in holding annual exhibitions. These county and township shows have degenerated very much within the last twenty years, but particularly within the last ten years. We are carefully considering steps by which they can be made to fill a more useful niche than heretofore. As an experiment this year a number of these shows were arranged in a circuit, and the exhibitions were held one immediately after the other, and expert judges were sent to do the judging in the cattle, sheep, swine and horse departments. After it was done, each judge gave his reasons for awarding the prizes as he did. The plan of sending these expert judges to the county and township fairs has this year proved an unbounded success. Has anything of this sort been done in your State, and, if so, with what results?

In the Province of Ontario some years ago prizes were offered by the Provincial authorities for the best managed farm in certain districts. At that time this work was in the hands of the Board of Agriculture and Arts; but in time this body was found to be very cumbersome; it was done away with and the Provincial live stock associations allowed to do the work previously done by this body, with the exception of the Prize Farm competition, which was discontinued entirely. In the Province of Quebec there had been a system of prize farm competitions for a number of years which, I understand, is giving fairly good satisfaction. Has anything of this sort been attempted in your State? If so, will you give me the Act or rules governing such competition, when it was commenced and how long it was continued?—F. W. HOBSON, Live Stock Commissioner, Ottawa, Ontario.

Our county and town fairs have largely lapsed, owing to lack of appropriation by the Legislature, and we have now little more than speed contests, except at a few leading points where stock shows are connected therewith. No doubt very great advantages would accrue from having expert judges make a circuit, as you mention. We shall possibly come to that advanced state some time in the future. The only improvement we can now report is the recourse to expert judges at our State Fair. For several years the single-judge system has prevailed, replacing the old committee arrangement. But this is not accompanied by demonstration on the part of the judge of the reasons for his awards.

During the first decade of the American occupation of California, from 1850-60, we had a system of inspection of farms by an expert committee appointed by the State Agricultural Society, and awards were made for such entries. The old reports of the State Agricultural Society show that the committee did very conscientious work, and the information which was gathered and published in the transactions was of very great advantage in the promotion of agriculture and horticulture in this State just at a time when there was greatest thirst for information as to what could actually be done under our novel local conditions. In the '70s our State Agricultural Society had a lapse, and, although it has done good work in some years in agricultural lines since that time, it has never undertaken such expert examination and award as prevailed in the earlier days. The interest in the speed contests seems to overshadow all other interests, although our directors do make continual and very energetic effort to develop the other side. As it is so long since we had any farm judging in operation, the method and regulations will be of very little account to you now, nor do we know where they could be found.

### Soy Beans for Poultry.

TO THE EDITOR:—I have noticed from the Experiment Station that Soy beans are very rich in protein and wondered if they could be used economically for poultry feeding. Will some of your readers give their opinion through the PACIFIC RURAL PRESS? Also, what they are worth and where they can be got?—SUBSCRIBER, St. Helena.

Soy beans are rich in protein, as are all other beans, and to that extent are good to combine with wheat in poultry rations. The dry beans are not available, as a rule, for chicken feed, for fowls do not like them, unless they are more highly educated than those which we have had experience with; but coarsely ground or finely cracked beans can be used to advantage in making mash for fowls, and in such mixture they eat them readily. Soy beans are not largely grown in California, and the few we have are



chiefly grown by Chinamen on the moist lands of the Sacramento and San Joaquin rivers. The plant does not like our summer conditions, except on low lands, and, according to our observation, is not more hardy against heat and drouth than our common pink bean. You can get from our seedsmen enough for a trial under your conditions, and it would not be wise to plant a large acreage until you prove the plant on a small scale.

Unhealthy Bedbugs Wanted.

To THE EDITOR:—Will you please inform me if I can get a supply of diseased bedbugs from the station? I find the bugs are a serious pest in this section, and ordinary remedies seem to have little effect on them—at least, in this house. I am using corrosive sublimate, dissolved in gasoline, and apply with a feather. I think, though, they are all through the house, and that what I destroy on the beds makes very little difference with the supply.—READER, Riverside county.

We have not heard before of the proposition of distributing diseased bedbugs for the destruction of the healthy ones, and cannot, therefore, furnish you either material or information on that line. Can you inform us of your source of information and who is conducting experiments in that direction, for then we may be able to pursue the matter further? We doubt, however, that this plan would become popular. Most housekeepers are crazed at the mention even of a healthy bedbug, and how they would revolt at the mention of a sick one we can only imagine. The most recent recourse in the destruction of bedbugs in infested houses is the use of hydrocyanic gas fumigation—the same gas used in southern California for the treatment of scale insects on citrus fruit trees. Last week we gave a full statement as to the way in which this remedy is applied and how effective it proves.

Alfalfa Seed.

To THE EDITOR:—I wish to sow to alfalfa forty or fifty acres on Cottonwood creek, Shasta county. I understand there is a difference in quality of alfalfa seed and have been told that Salt Lake seed was best. What do you think of it?—READER, Shasta county.

Very much alfalfa seed has been brought to California from Utah during the last few years. We have understood that it was not so much extra quality in the seed, but that it could be landed here for less price than California growers thought acceptable, which led to considerable importation. It is possible that through growing alfalfa on new fields, as they did in Utah at first, the seed was fine. More recently, however, the fields seem to have become foul and considerable complaint has been made of Utah seed for its contents of weed seed, and it has been under a cloud for that reason. We know of no reason why Utah seed should be superior to California seed unless it be that Californians also were careless and allowed their seed to deteriorate. At present we should secure the best sample of seed to be found in the market, irrespective of its origin. It should be bright and plump and free from weed seed. This last point can be readily ascertained by throwing out some of it on a sheet of white paper so that the individual seeds can readily be determined. The characteristic bean form of the alfalfa can readily be distinguished from various weed seeds which may also appear. The most dangerous is dodder seed, smaller than the alfalfa, roundish and dark colored. If a fair price is paid we believe it will be possible to obtain a good, clean seed from reputable dealers.

For the Opium Poppy.

To THE EDITOR:—Where in California are the soil and climate best suited for the cultivation of the Papaver somniferum, and when should the seeds be planted?—E. D., Chester county, Pa.

The opium poppy thrives in nearly all parts of California, even in the hot interior valleys, providing its growth is arranged for during the cooler season of the year and moisture is supplied by irrigation as required. Probably, however, in the coast valleys the most favorable conditions are to be found, because of the more equitable climate and moisture supply. The plant has been grown in an experimental way here and there in California for the last quarter of a century or more, and some opium has been produced on a small scale. It has been found, however, that the scoring of the capsules and the scraping therefrom of the opium as it forms from the exuding sap,

require an amount of labor which makes the industry impracticable here, because of the high wages which have to be paid. We cannot compete with the cheap labor of Asia in this and several other products, which, so far as the growth of the plant is concerned, find very satisfactory conditions in California. The time of planting the seed would depend upon the part of the State in which the growth is to be undertaken. In the milder parts the sowing should be in the fall, so that the plant would get well established during the rainy season. There are some parts of the State, where the winter is severe and the spring late, that spring planting would do better. The plant grows very readily from seed—in fact, volunteers freely wherever the seed is scattered from the ripened capsules.

Pecan Planting.

To THE EDITOR:—I expect to increase my acreage of pecan nuts soon and I wish some information on planting. I have a descriptive circular from a Texas nurseryman which contains the statement that in California pecan growers are planting their trees 20 feet apart and heading them low. Everyone in this section of the country is planting about 40 feet apart and some think that is too close. Can you tell me whether the close planting and low heading is a success in your State?—GROWER, Florida.

There are exceedingly few pecan trees grown in California. The older trees have ample space, and, in fact, are isolated specimens. There is certainly no planting which would warrant the conclusion that these trees can be successfully grown 20 feet apart and headed low. Possibly some young plantings have been started in that way; but it is too soon to reach any conclusion as to how they will succeed. The whole acreage of pecans in this State is very small, and the commercial product has not yet reached any important amount.

Growing Early Cucumbers.

To THE EDITOR:—Will you give some information about growing cucumbers for a winter market?—READER, Del Mar, San Diego county.

The growing of cucumbers under glass for the winter market has not been found profitable in California, because the product is likely to come into competition with cucumbers grown in the open air in strictly frostless locations, of which there are a few in southern California. The growing of cucumbers in the open air for an early market depends upon the possession of light, warm soil in a region where there is practically no frost and abundant winter sunshine. If one has such a place, and water to keep the plants growing rapidly if the rains should not come at proper times, the operation is quite simple. Manure the soil well, digging deeply and mixing the manure thoroughly with the soil. Obtain from the seedsman seed of the earliest variety. Plant in hills, raising the hills somewhat above the general surface, so that in case of heavy winter rains they will not get too much water. If you have just the right place and the right soil for it, you will get cucumbers for the market somewhat ahead of the main crop, which is chiefly grown on lower, moister lands.

California Holly Growing.

To THE EDITOR:—Kindly give instructions for propagating "California holly." Would the wild seedlings do well after transplanting?—NEMO, Rumsey.

Growing from seed is not difficult. The wild seedlings will also do well if transplanted with the care usually given to evergreen plants. The best time for this will be shortly after the heaviest winter rains and frosts, when the soil becomes warm and while it still retains sufficient moisture.

Jerusalem Artichokes as a Culinary Vegetable.

To THE EDITOR:—Our Jerusalem artichokes have grown finely and we have been using them for the table for many weeks, and shall have enough to last through the winter if they will only keep. Will the rains cause the tubers to sprout if left in the ground or can they be dug up and kept like potatoes.—READER, Pomona.

We are glad to hear of your satisfaction with the Jerusalem artichoke as a culinary plant. The rains, during ordinary winter temperatures, will not cause the tubers to sprout. They usually remain dormant until the soil becomes warm in the spring. For this reason it is ordinarily possible to allow them to remain in the ground just as they grew and still have them available for winter use by digging as they are wanted. If you have a place where winter tempera-

tures are high so as to cause growth of the plant it will be necessary for you to remove the tubers from the soil and keep them in moist sand in as cool a place as you can find. The artichoke rots readily when out of the ground and for that reason cannot be kept as potatoes are.

Who Has Maltese Goats?

To THE EDITOR:—Will you please give me address of breeders of Maltese goats or Swiss milking goats, if you know of any, on this coast?—W. W. BAILEY, Lemon Grove.

We do not know of any of this breed in California.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending October 21, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

Heavy fogs have prevailed along the coast, somewhat retarding bean harvest, but in other respects conditions have been favorable for all late crops. Grape picking continues in Napa and Sonoma counties. Fruit drying is progressing. Apples are yielding a heavy crop. Citrus fruits are doing well. Grain threshing and hay baling are not yet completed in the southern coast counties, and every effort is being made to secure these crops before the rainy season. Corn harvest has commenced in some places; the yield is rather light. New grass needs rain. Cattle are in good condition. Plowing and seeding are progressing in some sections.

SACRAMENTO VALLEY.

The weather has been warm and pleasant during the week, with cool nights, and very favorable for fruit drying. Deciduous fruits and grapes are nearly all gathered. Tree pruning is progressing in some orchards. Orange shipments from Oroville will commence about Nov. 1st; the crop is reported of much better quality than last season's. Olives are turning, and picking will commence within a few days; the crop will be considerably heavier than that of last season. Grain and hay are mostly under cover, though large shipments are still being made. Young feed has made a good start. Rain would be very beneficial.

SAN JOAQUIN VALLEY.

Warm days and cool nights have prevailed during the week. There was a light sprinkle of rain on the 17th, but raisins were not injured. Conditions have been generally favorable for raisin making, and the crop will be out of danger in a few days. Large shipments of grapes are being made to the wineries, and table grapes and figs are moving to the markets. Citrus fruits are in good condition. Grain and hay are mostly under cover. Plowing is progressing in some sections, but will not be general until the rains begin. Some farmers are sowing wheat. Corn and potatoes are yielding fair crops. Irrigation water is plentiful. A weed with tough, woody stem, known as "woolly breeches," has appeared in some alfalfa fields on sandy soil in Fresno county.

SOUTHERN CALIFORNIA.

The weather has been generally clear during the day, with heavy fogs at night. There was a trace of rain in some sections on the 16th. Bean harvest is progressing, though somewhat retarded by fogs, and will not be completed until November; the yield will be considerably above average in Santa Barbara county and the quality excellent. A correspondent at Santa Monica estimates that the yield of small white beans in that vicinity will be 150,000 sacks. There will be an immense crop of celery along the Santa Ana river in Orange county. Walnut harvest is progressing; the crop of softshells at Anaheim will exceed early estimates. Oranges are in excellent condition, and it is estimated that the yield will be fully equal to last season's. Raisin making continues.

LOS ANGELES SUMMARY.—Bean threshing is in full operation, but delayed in some sections by fog. Crop turning out better than expected. Weather not favorable for raisin drying. Some oranges are being picked for early market.

EUREKA SUMMARY.—Good grain weather. Early rains, followed by abnormally high temperature, insure abundant feed for stock. Farmers are principally harvesting potatoes and gathering apples.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, October 23, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....	.02	4.31	5.16	3.66	68	48
Red Bluff.....	.00	1.93	3.05	1.70	90	50
Sacramento.....	.00	.56	1.02	1.14	88	50
San Francisco.....	.00	.82	1.43	1.25	82	52
Fresno.....	.00	.57	.44	.78	92	48
Independence.....	.00	.77	.84	.52	78	46
San Luis Obispo.....	.00	.28	1.93	1.56	96	48
Los Angeles.....	.00	.12	.26	.66	98	48
San Diego.....	.00	.06	.20	.41	96	56
Yuma.....	.00	.22	.02	.91	96	54



## THE DAIRY.

### A Comparison of the Yields of Arizona Dairy Herds.

During the year ending with the month of October, 1900, Mr. Gordon H. True of the Arizona Experiment Station kept as nearly as possible a record of the number of cows milked by each creamery patron of Salt River valley, the amount of milk and butter fat produced by each herd, and the cash received for the same. The number of cows was ascertained by the milk weighers at the creameries and the other figures were furnished by the creamery managers. In spite of an earnest effort to have this record complete, the desired information was secured only concerning the herds of less than half the creamery patrons of the valley. In some cases there was a suspicion on the part of the ranchman that some one wanted to know too much about his private business, and information was withheld. Many sent milk to the creamery only a part of the year. The data obtained, however, seemed to be sufficient to demonstrate the point that Mr. True desired to emphasize, that there are too many unprofitable cows in the dairy herds of the Territory. From Bulletin 39 of the Arizona Experiment Station, just issued, we take Mr. True's account of his interesting investigation:

**LOCAL CONDITIONS.**—In some localities the difference in profit returned by different herds might be attributed in a large degree to the different methods of handling and feeding. To a certain extent this may be true in Arizona, but in a far less degree, perhaps, than in any other State or Territory. In Arizona the almost universal practice is to feed cows alfalfa hay or pasture, or a combination of the two, without shelter. If there is a difference in feed it is in amount, so we consider it fairly safe to attribute differences in profit to differences in quality of the cows.

In the table the figures relating to herds failing to give a gross return of \$32 per cow are preceded by an asterisk:

TABLE I.—SHOWING THE AVERAGE YIELD OF MILK AND BUTTER FAT PER COW, WITH GROSS CASH RETURNS FOR THE SAME, IN FIFTY-EIGHT ARIZONA HERDS.

Number of cows	Av. pounds of milk	Av. pounds butter fat	Av. cash returns
1	21	7409	274
2	8	7587	269.20
3	43	5936	247
4	48	6676	236.60
5	23	5659	243
6	4	6019	238.15
7	9	3447	233.85
8	21	4438	234
9	12	6176	222
10	31	6442	219.10
11	24	6048	214.40
12	16	5672	214.85
13	23	4972	214
14	29	5863	214
15	9	5255	213.85
16	25	5778	210
17	12	5559	208.15
18	55	5681	205.15
19	15	5944	204.60
20	11	5607	202.50
21	15	Cream	201
22	6	5942	200.45
23	43	5505	200
24	4	4774	200
25	10	4819	199.50
26	17	4658	199.50
27	6	5886	198.10
28	44	5232	197.50
29	9	5462	192.25
30	25	4865	191.14
31	9	5240	189.30
32	19	4795	188
33	11	5168	187.90
34	54	5150	185.20
35	19	4302	183.60
36	9	5312	183.60
37	7	5229	179.25
38	5	4833	178.55
39	6	4667	177.35
40	8	4632	176.30
41	9	5095	169.05
42	9	4655	161.10
43	11	*4292	*158.20
44	7	*4154	*154.70
45	12	*4282	*150.40
46	7	*4187	*145.20
47	6	*4411	*144.25
48	12	*4248	*127.55
49	3	*2973	*125.80
50	10	*4085	*125.75
51	11	*3520	*124.25
52	6	*3735	*113
53	4	*3075	*109.10
54	5	*3059	*102.50
55	20	*3297	*101.65
56	5	*2585	*99.80
57	5	*2642	*87.15
58	11	*2019	*66.40

The year during which this record was kept was a particularly hard one on account of the very severe drouth, and the returns from the dairy herds of the Territory are probably somewhat below the average on that account. The difference between different herds is, we think, in but few cases to be accounted for by the difference in feed.

**THE TABLES.**—The facts collected are given in the tables following. The first table relates to herds concerning which data were collected for the year.

In the second column is given the average number of cows milked each month. This number is probably somewhat less than the actual number of cows in the herd, as no account has been taken of the number of dry cows, of which there are nearly always some in a herd. On account of the habit Arizona ranchmen have of buying, selling and renting cows, seldom keeping the same herd for a year, it was considered that in most cases the average number reported as in milk each month would most nearly represent the number of the herd for the year.

The third column shows the average number of pounds of milk per cow for the year. The figures are obtained by dividing the total number of pounds of milk delivered at the factory by the number of cows given in the second column.

The last column gives the gross returns per cow. This is obtained by dividing the total cash returns by the number of cows in milk, or by multiplying the number of pounds of butter fat by 20 cents. The price paid for butter fat at the different creameries for the year varied a fraction of a cent, but we have assumed that the same price—20 cents per pound—was paid in all cases, thus having a single basis for the comparison of all herds.

We have estimated the cost of keeping a cow a year to be \$32—\$12 for care and milking and \$20 for feed. The latter figure would be high in ordinary years, but during the unusually dry year in which this record was made prices of feed were high enough, we think, to warrant this estimate.

An examination of the above table reveals the fact that of the fifty-eight herds reported sixteen failed to pay what we have estimated to be the cost of keeping. The difference between the return of the average cow of the poorest herd and the average cow of the best herd is the difference between a loss of \$18.22 and a profit of \$22.80.

**FOR LESS THAN ONE YEAR.**—Besides the fifty-eight herds reporting for a year, forty-three herds reported for six to eleven months. We have collected the results of these reports in the following table, giving the number of cows milked, the number of months reported, and the average gross returns for those months. As in the preceding table, the figures relating to herds not paying their keeping are designated by an asterisk:

TABLE II.—SHOWING AVERAGE GROSS RETURNS PER COW IN FORTY-THREE HERDS REPORTING FOR A PART OF A YEAR.

Number of cows	Number of months	Av. gross returns per month
1	19	10
2	6	8
3	18	9
4	6	7
5	5	7
6	25	6
7	25	6
8	19	6
9	9	8
10	15	9
11	15	7
12	11	10
13	17	6
14	4	10
15	21	7
16	6	7
17	18	9
18	8	6
19	7	9
20	7	11
21	14	6
22	12	9
23	8	6
24	18	10
25	10	10
26	7	8
27	11	9
28	6	7
29	10	11
30	16	11
31	5	9
32	7	8
33	8	8
34	8	8
35	5	7
36	8	9
37	12	8
38	6	8
39	7	8
40	5	9
41	6	6
42	33	9
43	18	5

These two tables should furnish dairymen food for thought. Here is demonstrated the fact referred to above, that there are too many unprofitable cows in our dairy herds. These figures, however, do not show how many, for in order to do this a record of individual cows must be kept. In some of the herds that failed to pay expenses there may have been some good cows, while in the herds showing fair returns there were undoubtedly many unprofitable ones. In all probability there are few herds reported above from which the profit could not have been increased by selling some members of the herd for beef. One must go further than to simply determine the gain or loss of his herd; he must know which particular cows are responsible for gain and which for loss. That this is essential is demonstrated in the following part of the bulletin.

A DAIRY HERD RECORD.—For a year the writer

kept a record of the individual cows of two herds. The milk was weighed and sampled at every milking and the samples tested twice a month, the writer testing the milk and keeping the record as his share of the work. The owners of the herds state that the extra time required to weigh the milk, record the weight and take the samples did not exceed one minute per cow. The samples tested every two weeks were composite samples, consisting of a part of the milk from each milking during the two weeks, and were kept in condition for testing by the addition of bichromate of potash and bichloride of mercury in about equal parts. The time required for testing the samples for the two herds was about half a day. The Babcock test was used.

It was the original idea to secure herds fairly representing the different breeds used for dairy purposes, but the men owning Shorthorn and Holstein herds failed to co-operate when the time came to begin the test. Of the two herds of which records were kept, one consisted of twelve full-blood Jerseys. The other consisted of thirty-five cows of mixed breeding, some high-grade Shorthorns, some grade Jerseys and others of various admixtures of blood. Only thirty cows in the latter herd completed the year's record.

In the following table the record is given as of a single herd, except that the figures relating to the cows of the full-blood herd are marked \*. The record as it was kept shows the amount of milk and butter fat given by each cow of the two herds for each period of two weeks during the year, and from each we have taken the following summary, which gives not only the number of pounds of milk and butter fat produced during the year, with the average per cent of fat, but an estimate of the gross and net returns from each cow for that time. As in the preceding part of the bulletin, gross returns are figured on the basis of 20 cents per pound for butter fat and \$32 per head as the cost of keeping a cow for a year. The table hardly needs any explanation:

TABLE III.—SHOWING INDIVIDUAL RECORD OF FORTY-TWO COWS.

Rank of cow	Age	Days in milk	Pounds of milk	Per cent of fat	Pounds of fat	Gross receipts	Net receipts
* 1	11	353	7945	4.43	352.23	70.45	*38.45
2	5	357	7978	4.36	348.74	69.75	37.75
3	10	335	8727	3.66	319.13	63.83	31.83
4	7	315	7294	4.27	311.74	62.35	30.35
* 5	14	340	6489	4.60	298.75	59.75	*27.75
6	5	350	6614	4.45	294.82	58.96	26.96
* 7	12	345	6527.5	4.5	293.85	58.77	*26.77
8	7	365	6433	4.39	282.99	56.60	24.60
* 9	4	365	6535.5	4.25	277.51	55.50	*23.50
* 10	12	348	5990	4.36	261.44	52.29	*20.29
11	8	330	5363	4.84	258.96	51.79	19.79
12	5	333	5383	4.72	254.36	50.87	18.87
* 13	7	365	4933	5.1	253.79	50.76	*18.76
14	4	351	6351	3.98	253.31	50.66	18.66
15	15	288	7770	3.25	252.42	50.48	18.48
16	7	284	7052	3.40	239.85	47.97	15.97
17	5	365	5118	4.66	238.55	47.71	15.71
18	7	256	5305	4.50	238.38	47.68	15.68
* 19	4	324	5192.5	4.58	238.00	47.60	*15.60
20	4	291	4459	5.28	235.74	47.15	15.15
21	3	343	5862	4.02	235.74	47.15	15.15
* 22	4	350	4654	5.04	234.76	46.95	*14.95
23	5	315	4951	4.73	234.34	46.87	14.87
* 24	12	360	5728.5	3.87	221.58	44.32	*12.32
25	7	345	5940	3.73	221.27	44.25	12.25
26	5	365	4855	4.51	219.21	43.84	11.84
27	3	338	4327	5.01	217.02	43.40	11.40
28	7	228	4766	4.49	214.27	42.85	10.85
29	4	233	5434	3.89	211.12	42.22	10.22
30	7	344	4470	4.69	209.53	41.90	9.90
* 31	3	361	4180.5	4.95	207.2	41.44	*9.44
32	15	271	6727	3.07	206.31	41.26	9.26
33	6	311	5041	3.94	198.57	39.71	7.71
* 34	3	356	4557.5	4.35	197.99	39.60	*7.60
35	7	241	5838	3.36	196.19	39.24	7.24
36	7	285	4239	4.53	191.94	38.39	6.39
37	8	219	5402	3.58	190.51	38.10	6.10
* 38	13	365	3830	4.82	184.45	36.89	*4.89
39	4	365	3964	4.41	174.74	34.94	2.95
40	3	342	3741	4.39	163.70	32.74	0.74
41	4	305	3559	4.43	137.87	27.57	-0.43
42	5	335	3126	4.51	141.13	28.23	-3.77

\* Full blood.

For the sake of comparison it will be interesting to know that these two herds gave an average gross return for the year of \$53.28 and \$48.60 respectively, thus ranking among the very best herds in the Territory, and yet two cows failed to pay the requisite \$32.

## THE SWINE YARD.

### Hog Cholera in the Sacramento Valley.

The meeting of hog growers in Red Bluff on Oct. 19 was held according to announcement, and Dr. A. R. Ward, Veterinarian of the Agricultural Experiment Station of the State University made a report of his



investigations, of which the following is an authorized abstract:

**THE DISEASE.**—Hog cholera, the disease that is causing extensive losses to the hog raisers in California, is a common, well known disease in every part of the United States where hog raising is extensively carried on. It is one of the two destructive swine diseases, the other being swine plague. The latter disease occurs simultaneously with the cholera, is in nearly every outbreak and is responsible for part of the losses from swine diseases. The speaker has made but few post mortems in Red Bluff, and as yet has only found hog cholera. This disease has been known in the United States since 1833, but our first valuable information concerning its cause dates from the discovery of the germ of hog cholera in 1885 by the Bureau of Animal Industry.

**DIAGNOSIS.**—Hog cholera cannot be recognized by its symptoms alone, a post mortem examination being necessary. When the animal has suffered from a rapidly fatal attack, the alterations recognized in the internal organs consist of red blotches on the lining membranes of the chest and abdominal cavities. The intestines and stomach may show red spots both inside and outside. The lining of the heart sac, the heart, the caul, the kidneys and the membranes supporting the intestines may also show red spots. Lymphatic glands scattered along the course of the intestines and located in the membrane supporting the intestines are generally engorged with blood. Similar red colored glands may be found embedded between the lungs. The lungs may be diseased to some extent. When the animal has suffered from the slow type of the disease, a seriously diseased condition of the large intestines is found. Ulcers consisting of areas where the intestinal wall is dead are commonly found in the large intestines and in the blind pouch at its end, where the small intestine joins. These spots usually are colored, a mixture of yellow and black.

**SPREAD OF THE DISEASE.**—The disease is caused by the hog cholera germ and by nothing else. The spread of the disease is determined by the introduction of the germs from diseased animals to healthy ones. The germs are exceedingly small, 15,000 placed end to end being required to make a row an inch long. Since they are so small, they may be spread through the country in a large variety of ways. Chief among these are:

1. Purchase of hogs from diseased herds. The animals may be actually suffering from a mild attack of cholera, or they may convey the germs upon the filth adhering to their bodies.

2. Railroad shipping pens, cars and other enclosures may harbor infecting material dropped by diseased hogs in transit.

3. There is an overwhelming amount of evidence showing that the disease may be carried by streams of water. It is criminal carelessness to throw a dead hog in a stream or to allow diseased hogs to have access to a stream.

4. The germs may be carried from the diseased to the healthy by the filth adhering to the shoes of a man, the feet of a dog or farming utensils.

5. Buzzards and other carrion birds and animals may spread the disease.

Burning or deep burial is much safer than the lazy method of allowing carrion birds to devour the carcasses. When the disease breaks out in a neighborhood, it will be safest for a man to sell his hogs to the butcher before they become diseased.

**TREATMENT.**—If hogs become diseased, they should all be driven on a range where no hogs have died, and the sick should be separated from the healthy. All should be given a change of diet, as a monotonous diet is liable to disturb the digestion and make the hog more liable to an attack of the disease.

No drugs can be relied on to effect a cure, but the Bureau of Animal Industry of the United States Department of Agriculture recommends the following mixture as a tonic and appetizer to fortify the systems of the hogs and make them more resistant to disease: Wood charcoal, 1 pound; sulphur, 1 pound; common salt, 2 pounds; sodium carbonate, 2 pounds; sodium hyposulphite, 2 pounds; sodium sulphate, 1 pound; antimony sulphide, 1 pound. Powder and mix. Give a tablespoonful to each 200 pounds of weight, in mushy food once a day to all the hogs. It will improve their condition.

This mixture is extensively sold as a preventive, or "sure cure," at a high price; but the hog owner can obtain it much more cheaply by having it put up at a drug store for himself.

There are plenty of well advertised "sure cures" on the market, but there is no drug known that will cure an ulcerated condition of the intestines, such as occurs in hog cholera, or in typhoid fever in man, where a similar ulcerated condition exists. In typhoid fever of man, even, a cure is only effected by time, absolute rest, careful nursing and other means, all of which are impracticable in treating a sick hog. Carbolic acid, creosote and lime will kill germs, but it is useless to feed these germicides to a hog when the germs of the disease are scattered through nearly all the organs of the body.

**PRECAUTION.**—Feeding pens, etc., where hogs have died may be rid of disease germs and made safe by the application of disinfectants to the woodwork after thorough washing. The following is a good dis-

infectant recommended by the Bureau of Animal Industry. It is quite corrosive, and care should be taken to protect the eyes and the hands from accidental splashing: Crude carbolic acid, half a gallon; crude sulphuric acid, half a gallon. These two substances should be mixed in tubs or glass vessels. The sulphuric acid is very slowly added to the carbolic acid. During the mixing a large amount of heat is developed. The disinfecting power is heightened if the amount of heat is kept down by placing the tub or demijohn containing the carbolic acid in cold water, while the sulphuric acid is being added. The resulting mixture is added to water in the ratio of 1 to 20. One gallon of mixed acid will thus furnish twenty gallons of a strong disinfecting solution, having a slightly milky appearance. The mixture should be applied to the walls and floors of the building, saturating them with it.

Small inclosures may be disinfected with quicklime, but extensive areas must be kept free from hogs for a period varying from six months to a year before the hog cholera germs will die out.

**VACCINATION.**—The serum treatment devised by the Bureau of Animal Industry has saved from 70% to 80% of the hogs in outbreaks in Iowa, where it has been used experimentally. The Government will not undertake to make the serum for wholesale distribution, but expects the various agricultural experiment stations to undertake the preparation and distribution of the remedy in the interests of the hog owners in their respective States. Much experimental work must yet be done toward lowering the cost, simplifying the details of preparation and improving the effectiveness of the curative serum. The following paragraph is one of the urgent recommendations by Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, in his last report:

"It is recommended that a special effort be made to instruct representatives of the State experiment stations in the manufacture and use of the anti-toxin for hog cholera and swine plague. This, in connection with the formula published in Farmers' Bulletin No. 24, constitutes the best treatment for these diseases, and saves an average of 70% to 80% of the hogs in infected herds. The Bureau has demonstrated the efficacy of the treatment, and it is now for the stations and commercial houses to supply the serum. The Bureau cannot possibly undertake to supply this product, except perhaps in small quantities to experiment stations, since it has not the facilities for manufacturing it upon the scale that would be required to grant relief to the different sections of the country."

**LOCAL NEEDS.**—From observations made during residence in this State, Dr. Ward has become convinced that swine diseases most urgently need the attention of the new Veterinary Division of the State Agricultural Experiment Station. Liberal appropriations have been recently made for the purpose of investigating animal diseases in some of the Eastern States, but nothing has been done as yet in California. Dr. Ward expressed his willingness to undertake the study of swine diseases and the preparation and distribution of the curative serums.

Without quarantine measures enforced with justice to all and with the intelligent co-operation of the owner himself, hog cholera must remain a serious factor in the hog business. While a system of quarantine is disagreeable to the individual, its effect upon the community is desirable. These statements are not made hastily nor without ample facts to support them. The Bureau of Animal Industry, by carefully conducting experiments in Iowa, has demonstrated that it is profitable to the hog owners in the long run to not only quarantine infected herds, but to kill every affected animal.

The Federal Government will not interfere in an outbreak like the disease decimating the hogs in northern California, but leaves such matters to the State authorities. The Federal Government cannot enforce quarantine measures within a State without permission from the State Government, except where the disease threatens interstate commerce. The State Veterinarian, with the approval of the Governor, possesses authority to quarantine diseased herds.

## ENTOMOLOGICAL.

### Latest About Canker Worms.

Edwin M. Ehrhorn, Horticultural Commissioner of Santa Clara county, has been stationed for years in the canker worm belt and has given much attention to this insect. As the canker worm is enlarging its belt each year in California the latest ways of fighting it are becoming more widely interesting. Mr. Ehrhorn answers some questions in Tree and Vine as follows: The canker worm generally appears in March but the worms are at first so small that they are not noticed by everybody until they have attained a good size. The worms hatch from eggs laid in small clusters on the smaller branches of the tree by a small wingless moth of a light brown color and more or less shiny. At first glance one would hardly regard this degraded individual as a moth, but all that is wanted are the wings, and nature has given

her mate the preference and has given him a good pair, so that we have two different looking individuals belonging to the same family and species.

**TRAPPING.**—The first appearance of the canker worm moths is about November 15th, although in some seasons they may appear a little earlier and in some seasons a little later. They crawl out of the soil adjacent to the tree, where the worm has been hibernating during the summer months in the chrysalis or intermediate stage. The female being wingless has to crawl up the trunk of the tree to get into the smaller branches, where she prefers to lay the eggs. The wire mesh trap has been successfully used in preventing her ascent, and it is with the greatest care and closest observation that this can only be done successfully. The first step is to get the right size mesh wire, which should be either fourteen or sixteen mesh wire, as any larger size mesh will let the insects go through and up the tree, and all the time, labor and expense is wasted. Wire should be purchased according to the size of the tree so as not to waste much, and then the traps should be cut according to a regular pattern so that a perfect fit can be made. A good thick band of burlap or cloth—some use cotton batting, but the birds sometimes like to use this in building nests—should be put around the trunk about 18 inches from the surface of the ground, then the trap adjusted and held in place by an awl until a piece of wire, generally No. 16, 17 or 18 annealed wire, is placed around the top of the trap and twisted tight so that the trap hugs the burlap well.

When the moth appears she will crawl up under the trap, which should be from 1 to 1½ inches away from the bark, and seeing light through the mesh endeavors to crawl through, but wedging her head partly in the mesh soon dies. Some crowd themselves so tightly between the wire cloth and burlap that they also soon die and a few only are able to lay eggs on the burlap, the wire mesh or the bark. About the 2d of December the insects are all out of the soil and the traps must be removed so as to kill the eggs that may have been laid as stated above. The traps can be thrown into boiling water, the burlap burnt and the trunk of the tree given a good coat of whitewash. If all has gone well there should be no canker worms in spring, but if through some fault, neglect or other cause the moths did get up into the tree, then the only remedy is to spray with Paris green and this should be done as soon as the small worms are noticed.

**POISONING.**—When buying Paris green great care should be taken to get a good article. The dealer should guarantee that it contains 50% of arsenious oxide. If the Paris green is pure, then a solution of one pound to 200 gallons of water, adding five gallons of well strained milk of lime, should do good work. In our experience last season we found that very little good Paris green was to be had, and a pound of Paris green was used to 100 gallons, 75 gallons and in one case to 50 gallons of water, before good results could be had.

## THE IRRIGATOR.

### Something Worth Knowing About Mud.

Director R. H. Forbes of the Arizona Experiment Station has prepared a very pertinent statement under the above very taking subject. His conclusions are largely applicable to this State. He holds that the alluvial silts which are always carried, in greater or less quantity, in river waters, although they detract from their agreeableness, are second in irrigating value only to the water itself.

**WHY THERE IS MORE MUD.**—In wild country, undisturbed by the operations of man, and still covered with its natural vegetation, the quantity of silt contributed to running streams is comparatively small, and consists largely of materials eroded from steeper slopes. But when forests and grassy plains are overrun with sheep and cattle, when the grasses are destroyed and the surface is ground to powder by trampling herds, when the rainfall begins to gully the depleted range and carry the debris into the rivers, the quantity of mud carried in irrigating streams becomes very much greater. Its quality, also, must be affected by the stock manure swept into the drainage from the surface of the ranges.

Now, just as the deposit of mud resulting from the annual overflow of the Nile, accounts for the fertility of the Egyptian low lands; so do the rich silts deposited upon irrigated lands in Arizona account, in large part, for their constantly increasing productiveness.

**RICHNESS OF MUD.**—The two most valuable constituents of our river silts are nitrogen and organic matter, being precisely the elements of fertility deficient in our burned-out arid region soils. The addition and incorporation of these deficient materials is largely responsible for the well-known improvement by irrigation of desert lands.

The fertilizing value of these river silts to an irrigated district may be judged when it is stated that, for the year ending Aug. 1, 1900, the mud deposited on the irrigated lands of Salt River valley, valued at



commercial rates for fertilizers, amounted to about \$1,000,000, or not far from \$8 per acre for the valley. Considered as an investment, this \$8 of value, which is disregarded in the cost of the water, returns with increase in the resulting crops.

Flood waters, heavily charged with silts, especially after a long season of dry weather, are, of course, far more fertilizing in character than the comparatively clear, low-stage waters. An acre-foot, equal to a 12-hour run of 40 inches, of three sample flood waters from the Colorado, Salt and Gila rivers, had the commercial fertilizing value, reckoning to include potash, nitrogen and phosphoric acid, shown in the following table:

	When sam- pled—1900.	Per cent silt by volume.	Commer- cial value.
Colorado river.....	Oct. 14-20	7.88	\$8.54
Salt river.....	Sept. 1-9	2.35	23.23
Gila river.....	Sept. 8-15	19.9	35.49

The value of occasional irrigations with water of this character should be considered in connection with artesian wells, and irrigation plants which pump from wells. Such water supplies contain no fertilizing silts, and, incidentally to their use for the irrigation of such as trees, vines and vegetables, it should pay the grower to arrange, where possible, for an occasional run of muddy water for fertilizing purposes.

**DRAWBACKS TO MUD.**—Muddy water has its disadvantages. Ditch cleaning is a serious item of expense to canal companies and to farmers, amounting, for instance, to about \$3500 a year for the 50 miles of main ditch belonging to one of the Salt River valley canals.

Tender vegetation, also, such as young alfalfa, is often destroyed by a coating of mud on the leaves; but with the furrow method of irrigation, where available, and other precautionary measures, the damage from this cause may be greatly lessened.

**MILKY MUD.**—In this connection, the milky sediment in the upper Gila resulting from the milling operations at Clifton, is of interest. The irrigating water thus contaminated is popularly supposed to be injurious to vegetation; but samples examined in the station laboratories show nothing chemically objectionable either in the water or in the sediment. In agreement with this evidence, Henry Hill, a successful gardener near Clifton, says: "My large garden has been a steady producer since 1894, during all of which time it has taken the water direct from the works of the Arizona Copper Company, the water so taken having always been adulterated with tailings. \* \* \* I have had no difficulty in raising fruit and all varieties of vegetables."

The only injurious effect to be expected from the use of these tailings, which are largely composed of sticky clay, is coating the leaves of vegetation, as mentioned above.

The failures of potatoes, beans and other crops attributed to the use of this water may easily be due here, as in other localities, to other causes.

**MAKING LAND WITH MUD.**—River mud, however, is unquestionably a menace to storage reservoirs, especially on so murky a stream as the Gila, whose waters we have observed to contain as high as 19.6% by volume of well settled mud. Yet even this fact may be made use of for filling in the depressions of rough land. Its efficiency for this purpose is illus-

trated by the experience of one farmer of Thatcher, Ariz., who states that, having a little water to spare, he threw an embankment about 3 feet high across the lower end of a piece of rough land and turned in his muddy water. In six weeks the embanked space was half full of mud, and, being drained, has given him a valuable field of most fertile soil.

#### An Olive Organization.

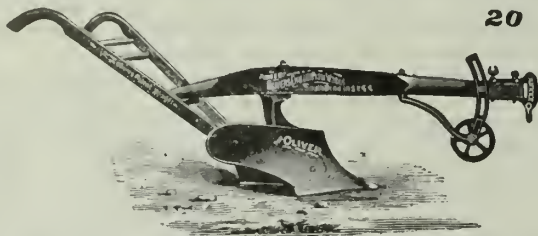
A meeting of olive growers was held in Los Angeles on Oct. 17th to discuss ways and means of obtaining better prices for their product. More than two-thirds of the olive growers of the State were present or represented. The necessity of an organization of the olive growers has been apparent for some time, and the meeting was called at the suggestion of the olive growers of the northern part of the State, who have not been able to make anything on their crops for several years.

It was agreed by those present that a committee should be appointed looking to the organization of all the olive growers of the State, but first forming a local organization. Specific laws against the adulteration of olive oil will be urged upon the next Congress. The growers present represented more than 2500 acres of olives, and they all reported the largest crop ever known.

The following committee on permanent organization was named: C. A. Washburn, Los Angeles, chairman; R. F. Billings, Corona; E. R. Meserve, Los Angeles; A. R. Sprague, San Francisco; H. Sturdivant, Los Angeles.

# Oliver Plows.

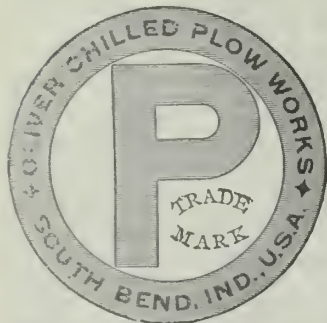
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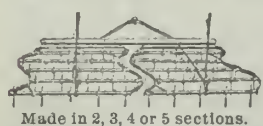
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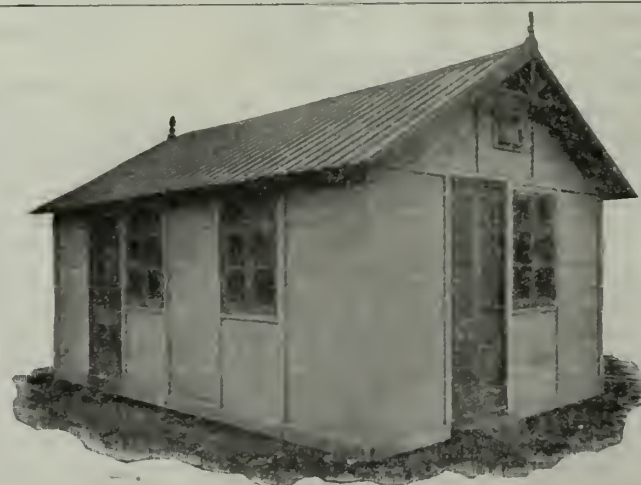
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# Agricultural Review.

## ALAMEDA.

**HAY CROP NOT UNDER COVER.**—Liv-  
ermore Herald: With the exception of a  
few straggling loads, hauling is over and  
the big hay barns are filled to the roof  
and the doors are locked. Although the  
strike is over and the blockade in Oakland  
and San Francisco is broken, there is still  
a great scarcity of cars. Ten carloads  
were shipped out Wednesday, but the  
average is but little over three carloads  
a day. Railroad officials attribute the  
scarcity of cars to a rush of Eastern traf-  
fic, and do not hazard a guess as to when  
it will be over. Agent Mitchell estimates  
that it would require twenty carloads a  
day from now on until the new hay comes  
in to move this year's local crop to mar-  
ket.

## KINGS.

**SHORT HONEY YIELD.**—Hanford Jour-  
nal: Mr. Filson, owner of an apiary in  
Kings county, reports that the bee men  
here will harvest only about one-fourth of  
a crop of honey this season.

**HEAVY FATALITY AMONG DAIRY  
COWS.**—Lemoore Leader: Lou Hansen  
returned a couple of weeks since from the  
coast, bringing back with him about sixty  
head of fine dairy cows, which he turned  
out to pasture on his ranch. On Tuesday  
afternoon of this week over thirty head  
of these cows died within a few hours.  
The field in which they had been grazing  
being literally covered with their car-  
casses. The cause of this sudden demise  
in Mr. Hansen's herd is attributed to the  
disease known as Texas fever. A number  
of the other cattle are also reported as  
ailing, and the prospects are that Mr.  
Hansen will lose still more of his valuable  
dairy herd, for some of which he was  
recently offered as high as \$55 a head.

## LOS ANGELES.

**UNUSUAL OLIVE CROP.**—Downey  
Champion: The olive growers are jubi-  
lant over the largest crop in the history  
of the State. There may be as much as  
800 tons, or equal to about 5600 barrels  
of pickles, as against a usual crop of 2000  
barrels. The price usually runs from \$60  
per ton, but this year the growers expect  
to receive about \$40. Even at this price,  
with unusually large yield, the income  
will be much larger than usual.

## NAPA.

**WINE MAKING IN PROGRESS.**—St.  
Helena Star: Wine making is under  
headway in St. Helena and vicinity, but is  
progressing slowly on account of the  
scarcity of grapes. In some parts of the  
valley the crop is better than was ex-  
pected, but, upon the whole, it is very  
short—little more than half a yield. The  
price seems to have settled down to from  
\$25 to \$26.50 per ton, the latter figure be-  
ing really the buying rate. The quality  
of the grapes is said to be excellent, and  
the rain thus far has not wrought any  
injury.

**A BIG CROP.**—St. Helena Star: W. E.  
Fealy of Rutherford is harvesting the  
banner corn crop of the vicinity. Mr.  
Fealy has fifty acres, from which he is  
getting three tons to the acre. He has  
sold the entire crop.

## MERCED.

**YAMS THRIVE.**—Merced Sun: William  
Williams of Nineteen Hundred Colony  
brought a sweet potato of the yam variety  
to town and presented it for exhibition.  
As the reader has already doubtless sur-  
mised, this is no ordinary potato. It  
weighs thirteen pounds.

## ORANGE.

**SOME WALNUTS.**—Anaheim Gazette:  
Mr. Crowther, while in town on Saturday,  
said the estimates of some of his neigh-  
bors that he would have sixty tons of wal-  
nuts would not be far from the correct  
figures. Some of his trees are yielding 250  
pounds of nuts. When it is considered  
that fifty pounds per tree is a good aver-  
age, and that many trees do not produce  
twenty, the excellence of Mr. Crowther's

trees is apparent. His crop has been es-  
timated as high as \$12,000.

**ORANGE GROWERS.**—Anaheim Gazette:  
The Placentia Orange Growers' Associa-  
tion has elected the following Board of  
Directors for the ensuing year: Major E.  
F. C. Klokke, A. McDermont, A. Pierotti,  
A. T. Pendleton, A. S. Bradford, Theo-  
dore Staley and R. J. Laidlaw. Major  
Klokke is president; A. McDermont, vice-  
president; Arthur Staley, secretary;  
Arthur McDermont, manager of packing  
house.

**ORANGE COUNTY CORN.**—Santa Ana  
Blade: Secretary White of the Chamber  
of Commerce has secured some samples of  
corn on the stalk to be placed in the Or-  
ange county exhibit at Los Angeles.  
Some of the stalks measured 18 feet long,  
5 inches in circumference at the base and  
5 inches in circumference 10 feet up.

## RIVERSIDE.

**IMPORTING PURPLE SCALE.**—River-  
side Enterprise: The Board of Horticul-  
tural Commissioners recently found a  
small invoice of hothouse plants that had  
been sent here from Los Angeles, and on  
examination saw they were infected with  
purple scale, the worst pest that ever ap-  
peared in the State. The plants were all  
burned as the only way of removing this  
dangerous enemy to horticulture.

## SAN BERNARDINO.

**FIELD PEAS IN ORANGE GROVES.**—  
Redlands Facts: The orange growers  
state that a great many more field peas  
are being sown this year than usual. The  
green under the tree delights the eye of  
the tourist. It is not remarkable that  
the use of the field pea is greatly coming  
into favor, as it saves about six months of  
cultivation, helps to prevent the soil from  
being washed by the heavy winter rains,  
and, above all, furnishes the most expen-  
sive ingredient (nitrogen) of a perfect fer-  
tilizer and at a nominal cost.

**FIRST CAR OF ORANGES.**—Redlands  
Facts: The first car of oranges was  
shipped from this city on the 15th inst.  
by A. Gregory. They are Navels, highly  
colored and said to be quite sweet for first  
shipment. This is about one month  
earlier than the first shipments hereto-  
fore made.

## SAN DIEGO.

**JULIAN APPLE CROP.**—San Diego  
Union: According to J. E. Hamilton  
the apple crop in Julian and vicinity will  
be larger than the first estimates. He  
believes that the total footings will be  
about 15,000 boxes, of which over two-  
thirds have not been contracted by any  
buyer. The list of those who have not  
sold includes: M. D. Putnam, 2500 boxes;  
Henry Morris, 2500; B. T. Pierce, 1500;  
James Tally, 500; Stephen Marlet, 600;  
Mr. Silvers, 1000; Chris McCain, 600;  
Hamilton & Price, 1000; J. B. Pearsons,  
500.

## SAN JOAQUIN.

**MILLING WHEAT SOLD AT \$1.**—Stock-  
ton Mail: Milling wheat was sold in this  
city recently at \$1 per cental. This is the  
highest price brought for a long while.  
It was an extra choice lot, however. The  
grain was in storage at M. P. Stein &  
Company's warehouse and was purchased  
by Mr. Martenstein of San Francisco.  
There were 1400 sacks. The ordinary  
quotation here is only 97¢ for milling.

**THE ALMOND CROP.**—Lodi Sentinel:  
L. W. Ortman, one of the most extensive  
almond growers in the county, reports his  
crop as considerably short and a portion  
of it not up in quality to that of last sea-  
son. Prices are, however, fairly favor-  
able and the growers will get small margin.

## SAN LUIS OBISPO.

**HEAVY GRAIN YIELD.**—San Luis  
Obispo Tribune: The harvest in San Luis  
Obispo county is about over—in fact, the  
harvesters are cleaning up odds and ends  
in the eastern part of the county. The  
yield in that section has been heavy, and  
it will take some time to market the grain.

## SAN MATEO.

**LARGE BEET RANCH.**—San Mateo  
Leader: E. W. McLellan, the Burlin-  
game florist, has leased 800 acres of marsh  
land from the Bowie and Howard estates  
and will engage in the culture of sugar  
beets on an extensive scale. His lease  
calls for the payment of an immense sum  
of rental each year—in the neighborhood  
of \$6000—and he is now erecting a barn  
for the large number of horses which will  
be necessary in the operation. The land  
has never been cultivated before, having  
been used for pasturage purposes in con-  
nection with the San Mateo Ranch Dairy.

## SANTA BARBARA.

**AYRSHIRES FOR DAIRYING.**—Santa  
Barbara Press: Mr. Giddings, the Pasa-  
dena dairyman who has been buying stock  
in this vicinity, has purchased six thor-  
oughbred Ayrshires from A. W. Canfield.  
The purchase does not include the Cana-  
dian bull recently received by Mr. Can-

field, but takes the herd, including the in-  
crease, brought in from New England  
two years ago. Mr. Canfield intends to  
restock with high-priced Canadian Ayr-  
shires.

## SANTA CLARA.

**PROLIFIC CUCUMBER VINES.**—San  
Jose Herald: L. D. Myers, on Fruitdale  
avenue, West Willows, has this season  
harvested 3700 pickles from seven hills of  
cucumbers, and the vines are still bearing.

## SANTA CRUZ.

**BELLEFEURS PUNCTURED.**—Watson-  
ville Pajaronian: The diabrotica has done  
much damage to Bellefeurs this fall. The  
beneficial ladybird is being blamed for  
some of the work, but it should not be.  
The diabrotica is the pest which bites the  
hole near the points of apples. It feeds  
on vegetable growth. Horticultural Com-  
missioner Rodgers has observed that it  
has an especial fondness for dahlias. If  
dahlias were planted in orchards, where  
the "yellow jacket" has worked for sev-  
eral seasons, he may transfer his atten-  
tions thereto.

## SONOMA.

**PETALUMA EGGS.**—Poultry Journal:  
Petaluma shipped more eggs and poultry  
to San Francisco last year than all the  
rest of the State put together. It is the  
egg center of the Pacific coast. Shipments  
last year: 2,028,240 dozen eggs, 28,170  
dozen poultry. Will be much larger this  
year.

## STANISLAUS.

**OVER 200 TONS OF GRAPES.**—Modesto  
Herald: The Bald Eagle Ranch vine-  
yard yielded 208 tons of grapes, sold to  
wine men at \$13.50 per ton. The grapes  
are Muscats, hence the low price com-  
pared with the rates commanded by dry  
wine grapes. The Bald Eagle product has  
heretofore been converted into raisins, but  
the price offered by the wine men ren-  
dered the sale of the grapes to them the  
more advantageous.

**MULE MARKET ACTIVE.**—Modesto  
Herald: W. E. Kewin of this city made  
another shipment of mules—sixty head—  
on Saturday, for Charles Sieford, a Mem-  
phis, Tenn., buyer. Over 100 head are  
now in Kewin's corral, acquired from our  
farmers by Bob Leonard, a buyer for the  
Kansas City, Memphis and Texas mar-  
kets, all of which have been depleted by  
British demands for South African ship-  
ment. All the "little" mules go to South  
Africa, via Galveston and New Orleans.  
R. T. McCullough of Crow's Landing is  
buying mules for sugar planters in the  
Fiji Islands, to which consignments have  
heretofore been made. He has over 100  
bunched for shipment at this time.  
H. Higenbotham of Stockton has shipped  
over 600 mules East. Prices range from  
\$40 to \$100 per head.

## SUTTER.

**OLIVE PICKLING.**—Sutter County  
Farmer: The olive season will soon open,  
but from the present outlook it will be  
short, as the crop is light. Last season  
several parties here operated pickling  
plants and the Munger Bros. also made a  
fine grade of oil. The price quoted is  
from 3¢ to 4¢ per pound.

## TEHAMA.

**A BIG LOAD OF WOOL.**—Red Bluff  
News: The second load of wool from the  
Cone ranch was hauled to town Wednes-  
day on two wagons, drawn by eight large  
mules. There were forty-three bales  
which averaged about 350 pounds, mak-  
ing the load 15,050 pounds. The load was  
worth, taking the average price paid for  
this fall's wool, 9½ cents per pound, \$1430.

## YUBA.

**HOGS DYING.**—Marysville Democrat:  
Reports come from Linda township that  
a disease of some kind is prevailing among  
hogs on some of the farms, though few  
have died. There is fear that it is conta-  
gious and may prove fatal in more cases,  
the same as in Tehama and Shasta coun-  
ties.

**A GOOD OUTPUT.**—The Marysville  
cannery has a record of 75,000 cases of  
peaches packed during the season just  
closed. There were 1500 cases of glass  
goods and 5500 cases of "extras" for  
dried shipment to Europe.



## Curb, Splint,

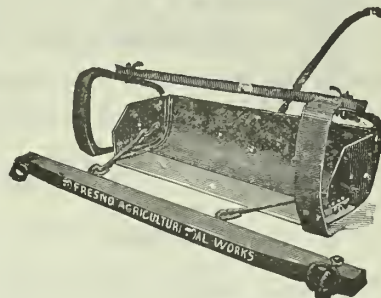
contracted cord, thrush, grease  
heel and all forms of lameness  
yield readily to

## Tuttle's Elixir.

Used and endorsed by Adams Express Co.  
Reading Trotting Park, Mass., Aug. 31, 1899.  
Dr. S. A. Tuttle, V. S.  
Dear Sir:—I want to add my testimonial to your list recom-  
mending Tuttle's Elixir for curbs, broken tendons, thrush, and nails  
in the feet. I have used it on all of these cases many times, and  
never failed to make a cure. J. H. NAY.  
Given internally it is sure cure for Colic, Distemper,  
Founder, Pneumonia, etc.  
TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains,  
bruises, etc. Kills pain instantly. Our 100-page book,  
"Veterinary Experience," FREE.  
Tuttle's Elixir Co., 88 Beverly St., Boston, Mass.  
437 O'Farrell St., San Francisco, Cal.  
Beware of so-called Elixirs—none genuine but Tuttle's.  
all ailments; they offer only temporary relief if any.

## The Fresno Scraper.

3 1/2 - 4 - 5 Foot.

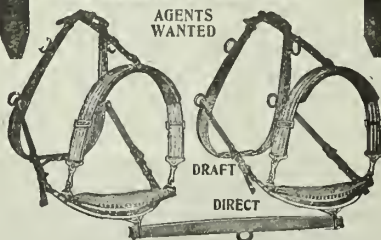


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FRESNO, CALIFORNIA.

## TO Farmers AND Storekeepers

WRITE TO  
Pacific Oil and Lead Works.  
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SAN FRANCISCO,  
For Booklet on Cultivation of  
FLAX SEED.  
You will find it of interest to you.  
Postal card will do.

## BAKER'S TRACELESS HARNESS



Best farm and field harness. Used and endorsed by  
thousands. More than saves its cost every season.  
Satisfaction guaranteed. Write to-day.  
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BLAKE, MOFFITT & TOWNE, Los Angeles.  
BLAKE MCFALL & CO., Portland, Or.

## Horse Owners! Use

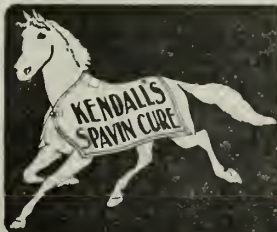
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## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes  
the place of all liniments for mild or severe action.  
Removes Bunches or Blemishes from Horses  
and Cattle. SUPERSEDES ALL CAUTERY  
OR FIRING. Impossible to produce scar or blemish.  
Every bottle sold is warranted to give satisfaction.  
Price \$1.50 per bottle. Sold by druggists, or  
sent by express, charges paid, with full directions  
for its use. Send for descriptive circulars.  
THE LAWRENCE-WILLIAMS CO., Cleveland, O.



## KENDALL'S SPAVIN CURE

There is no use taking chances on a lump. You  
can never tell what it may develop. If you have a  
supply of "Kendall's" on hand you are safe from  
Spavin, Ringbone, Splints, Curb and all forms  
of Lameness. The U. S. Army knows good things  
and buys only the best.

READ WHAT THIS MAN HAS TO SAY.  
Dr. B. J. Kendall Co., Gentlemen:—I have the honor to inform  
you that your Kendall's Spavin Cure is the best liniment, I believe,  
in the world. I have been a Farrier in the United States Army for  
14 years, and have never used anything to equal it. I had a horse  
with hip joint lameness, a spavin, swollen glands and shoulder  
lameness. I used two bottles of your Spavin Cure and they are  
sound and well. Yours respectfully, SILAS JOHNSON, Farrier.

On sale at all druggists. Price \$1;  
six bottles for \$5. Unequaled lin-  
iment for family use. Book "A  
Treatise on the Horse," mailed  
free. Address  
DR. B. J. KENDALL CO.  
Enosburg Falls, Vt.



## THE HOME CIRCLE.

## The Cost.

Uphill the path leads onward 'gainst the wind,  
All rough and steep it stretches to the skies;  
But in the distance shines the brilliant prize  
Whose flattery stirs to action limb and mind.  
Lithe Leader, to past victories deaf and blind,  
Seest thou thy rival's lengthening shadow rise  
Against the slope to vex thy prideful eyes?  
Let him whose courage fails now drop behind  
The trumpet's blare, shouts of the multitude,  
Proclaim to deafened ears—the race is done;  
But, Victor, dreamest thou what triumph cost?  
Look on the face of him thy strength subdued,  
And question well thy heart if victory won  
Be worth the pain to him who strove and lost.  
—H. C. Urner.

## One of the Others.

Providence, together with a newspaper advertisement, had brought about his engagement as cornet player in one of the big summer hotels. The hotel orchestra consisted of two besides himself—a violinist of Polish extraction, who in winter was employed at one of lesser city theatres, and a pianist. The pianist wore vivid neckties and parted his hair down the middle. He had a soul of brass and a wrist of iron. It was the duty of the trio to play during meal times, and also from eight to ten-thirty each evening in the great dining-room, cleared by the colored waiters for dancing. Under the electric lights the floor was then like a shifting flower-bed, gay with whirled muslin skirts and bright ribbons. Night after night, from the rostrum in the corner of the room, the cornet player watched the same familiar crowd; night after night he had to play the same music for their pleasure making. It was his first engagement of the sort, and for a time the thing was new to him. He liked to follow the comings and goings, the schemings and amusements of this world to which he must always be an outsider.

But after a while its sameness began to pall upon him. Always the one type in the flushed faces and dainty gowns swung past him; always the one kind of chatter came brokenly to his ears between the waltz tunes. He grew to see the universe peopled by a medley of puppets who danced mechanically; himself the machine that ground out their music. Two step, valse and schottische; valse and two step. He said once to the pianist with a half savage humor: "We might be nickel-in-the-slot machines—only they never put the nickels in!"

Out of his weariness grew presently a dull dislike, an antagonism against the fortune which had set him aloof there to play that others might dance. The proprietor of the hotel had named it Beacon-by-the-Sea; presumably because it stood a quarter of a mile inland. But the name worked its magic in advertisements, and the place was crowded. The cornet player used to watch the young people about him, and hated them bitterly for their pleasures and gayeties in which he could have no part. He was himself younger than many of them; he had all the yearning of youth toward youth, the keen hunger for enjoyment which is harder than any wants of later life. It is only the middle-aged man who can afford to wait and plan and dream. Each day takes us further along the road, and the cry of the young is to have their pleasure while yet they are young, not when they will have no longer need of it. The cornet player would have given the half of his later years for one hour of the transitory pleasure which these others of his own age took as their commonplace due. It would have meant so much to him. He brooded over it while he watched the maze of their shifting feet.

Often the younger set monopolized one side of the floor uproariously for a square dance. He had to listen to good humored chaff and snatches of laughter; jokes that he knew by heart. There was one Harvard student among them named Holden, who kept his companions in continual ripples of mirth. The cornet player grew to hate deeply the very sound of this student's voice.

Sometimes he pictured to himself with bitter sarcasm one of this carelessly good-natured set ever coming on to him between the dances to say, "Here, you have a turn once while I take your place!" But their kindness was only toward each other. It would stop at him like a high brick wall. He had had proof of this once soon after he first came there, when he had joined unconsciously in the laugh which followed a sally made by one of a little knot gathered by the edge of the rostrum. The look of blank and frigid astonishment whirled upon him instantly by the goddess of the party—a slim school girl in a muslin frock—was among those things which he would always remember. They plainly regarded him, if they regarded him at all, as merely a part of the hotel furniture. He was there to play their music, week in, week out, and to continue playing just the same, tired or willing, ill or well, until it pleased them to stop. Beyond this he could have no more part in their lives than the chairs they sat on or the floor upon which they danced.

He wondered sometimes if this view of their position ever appealed in the same way to his companions. They seemed to him to take the daily routine in a manner purely businesslike, even cheerful. Round the corner of the instrument he could watch from where he sat the automatic rise and fall of the pianist's steel fingers striking out deep octaves in the bass and wonderful treble runs that shook the piano like a storm. The pianist seemed to take no notice of the crowd beyond occasional comment on their individual appearance or characteristics. His whole interest in them he, in fact, summed up to the cornet player during an interval in the programme. "They never seem ready to let up, do they?" The cornet player almost envied him his supreme indifference. He questioned with himself whether the pianist had never at any time wished to change places with them; to dance, for once in his life, while others did the playing. He imagined him a man from whom long hardening had removed all human feeling.

On Saturday evenings the hop was open to outsiders. The dancing was then from nine to twelve. The atmosphere in the big room, under the glare of the lights, was all but tropical. The orchestra played with handkerchiefs tucked strategically into their collars. Windows were open to the west veranda outside, where the older people sat out and listened to music. Between numbers the dancers crowded out to stroll up and down between the closely placed chairs, the girls with light wraps flung round their throats in the cooler air. Inside the emptied room the musicians leaned back and fanned themselves with sheet music, glancing wearily at the clock. Through the open windows came mosquitoes and the hum of voices, and, very rarely, a breeze.

Between hours their time was to a degree their own. They employed these intervals of leisure after their own fashion. The violinist chiefly read police novels; the pianist lounged about the bar with his hat on and a perpetual cigar between his teeth, and on rare occasions when the hotel clerk was off duty played poker with him in a back bedroom. Through no intent on their part of unsociability, it happened that the cornet player found spare time hanging heavily upon his hands. He used to loiter about the outskirts of the tennis courts and watch the game. The Harvard student was always largely in evidence. He seemed, in fact, to lead everything. The hotel omnibus journeyed to the beach and back with a load of guests twice a day; frequently the Harvard student usurped the box seat, and drove the dusty team himself, aided by hilarious advice hurled from the rear. He had a banjeaurine, and on hot afternoons the young people used

to gather at one end of the veranda and shout college songs and choruses. The cornet player, smoking in a deserted corner of the lawn by the sidewalk fence, could hear their voices distinctly. Many of the songs were familiar to him.

It was at one of these afternoon gatherings that he first noticed the girl. She was a newcomer to the hotel, but it seemed that she knew many of the people there. Acquaintances were continually coming up to shake hands with her over the heads of her circle of companions, and she hailed them all delightedly by name. The veranda end became speedily a little tumult of voices and laughter.

The cornet player looked for her that evening among the dancers. Presently he saw her. She danced exquisitely; he had somehow known that by instinct. Her partner was the Harvard student, who appeared, on the ground of old acquaintanceship, to have annexed her frankly from the moment of her arrival.

She was small and bright and charming, and the sort of girl who was popular among girls as well as men. A crowd gathered about her always, on veranda or tennis court. She and the Harvard student were the leaders of every scheme that in the days following her advent kept the big hotel in an eddy of life and gayety.

The cornet player grew to watch her with an almost morbid interest, a loneliness that was perhaps less for her than for the world she typified. His longing had grown upon him bit by bit, till it was a passion that gripped his brain night and day. It might seem a futile thing, but he had brooded over it until it was real to him. He had never spoken to the girl, but he knew every tone of her voice, every echo of her laughter. His whole being moved with her each minute of the day. He hated the men whom she chatted and danced with, because they belonged by birth-right to her world.

"El Capitan" was the new two-step that summer. It was a favorite at the hotel. Sometimes the girl would step up to the rostrum and ask the pianist if he would mind playing it, and the cornet player hated the pianist savagely for his chance of a commonplace word and smile.

One evening the chance arrived to himself. It was during the interval—the big room was empty. His companions had stretched themselves, adjusted their wilted collars and strolled off to the bar. The cornet player was sitting with his instrument across his knees, and his head resting wearily in his hands. A rustle of silk aroused him, and he lifted his head to see the girl seated on the edge of the rostrum. Her partner had disappeared after a glass of ice water.

"I wonder if you've got a pin?" she said to the cornet player. "Look, I've put my foot through the flounce!"

"I believe so," he said awkwardly. "I'll see." He was feeling along under the edge of his waistcoat. Presently his fingers encountered a pin, and he drew it out and handed it to her. "Can I do it for you?"

"Why, thank you," the girl said. He dropped on one knee, and she watched him gather the torn lace together deftly. When he stood up again her gray eyes rested for a moment upon his flushed face.

"I've sometimes thought," she said abruptly, "you know, you play for us here every night—do you ever get tired?"

"Tired?" said the cornet player, a queer smile. He moved one foot on the floor. "Oh, we aren't paid to get tired!"

There was something in his voice that jarred upon her. It was as if she had laid her hand upon an obstacle unexpectedly in the dark. She wondered at him.

"I didn't know," she said hastily. "It just occurred to me. I should think you must, sometimes, and you're always so nice about it. Of course, we don't ever get tired of dancing. But that's different. Maybe we don't always just realize—"

"You don't have to realize," said the cornet player. His voice sounded alien to him. It was no longer himself speaking; it was outside force, the

voice of his thoughts sweeping past him. "You don't have to. It's all right for you to dance; you were born for it. But did you never think that, perhaps, there were others who weren't? Do you ever think what it must be like to be one of those who've got to do the playing all the time and never the dancing; always stand aside and just watch the others? I'm not thinking of myself only." He had a strange moment of not caring what he said. "I have a sister in the city. She's prettier than half the girls here, and she dances as well, and she sells ribbons behind a counter. All the pleasure she's had in her whole life wouldn't cost what you spend here in a day. I wonder what you'd think if you only saw things from outside—all the enjoyment—just look on, and play for other people, and keep right on playing all the time—"

He stopped. The girl was regarding him with wide, troubled eyes. "But—but—" she stammered. "You sit here, and joke among yourselves—you and the others. . . . I never knew—you cared that way!"

"Cared!" the cornet player laughed. "I'm twenty-two," he said, "and I've earned my own living since I was fifteen. Twenty-two; it's a great age. I'm supposed to be beyond caring for anything—any ordinary every-day pleasure. I'm supposed to get along just as easy without it. I shall be thirty before so very long, and then I suppose I shan't care. Maybe I'll be by the way of getting it then—when I don't want it any more!"

There was a silence. The outburst had passed and was leaving his commonplace self. He stood before her hot and awkward, profoundly ashamed.

There was a catch in the girl's voice. "I shall always hate dancing now," she cried, "always, I shall."

"Don't say that," said the cornet player. He smiled at her. "I want you to dance. Don't think that. I like to watch you." . . . He was groping for words to apologize. "Only—I guess I was crazy," he said. "I had no business—I don't know whatever made me talk that way."

He faced her, shamefaced, hating himself deeply, and saw, through a mist, pity and kindness looking at him out of her gray eyes. He fumbled with his collar.

"I understand," she said, softly. "I think I understand. And please don't think we—we don't ever care at all. I shall always remember it—always."

"Thank you." . . . He caught his breath hard and turned away, bending his head over the heaped music on the piano top. Across the floor he was aware of the Harvard student returning with the glass of ice water. People were coming in by twos and threes from the veranda. The two musicians loitered back jadedly, tucking their handkerchiefs once more around their necks, and scowling at the clock as they passed.

The pianist sat down, feeling for the pedal with his foot, and glanced at the score of "El Capitan" on the cornet player's stand. "Oh, this—old thing," he muttered wearily.

Five minutes later his hands were racing over the keys with a vicious swing and force—the carelessness of long practice.

Looking up, the cornet player saw the girl glide pass him on the Harvard student's arm. She smiled over her shoulder—a wonderful smile he only half understood, and which yet altered the world for him.

For a moment the little black notes wavered; presently they were clear again. He bent his head and played very earnestly.—Black and White.

Harry one day climbed up in a parlor chair, in order to reach something he wanted. "Don't get up in that chair with your feet, Harry," exclaimed his mother. "I just have to, mama," replied the little fellow. "I can't take my feet off."

How much wood would a woodchuck chuck if a woodchuck could chuck wood? He would chuck as much as a woodchuck could if a woodchuck could chuck wood.



## The Old Cow Bell.

I am carried back to childhood,  
To the days of long ago,  
When we wandered in the wildwood,  
Where the rippling waters flow;  
There we gathered youthful treasures  
Near the pasture by the mill,  
And we romped, with thrilling pleasures,  
Till we'd hear the old cow bell.

Oh, the pleasant recollection  
Of those joyous woodland plays!  
How it links my heart's affection  
With those happy childhood days!  
How we rambled through the meadows  
Even yet I love to tell;  
And, with evening's gath'ring shadows,  
Listen for the old cow bell.

—E. F. Larkins, M. D.

## Nelly, Shake Hands.

One day my brother was out driving  
in the country, when a stranger stopped  
him by exclaiming, "Hallo! that used  
to be my horse."

"Guess not," replied my brother.  
"I bought her at a livery stable, and  
they told me she came from Boston."

"H'm!" said the man. "What do  
you call her?"

My brother answered that the horse  
was sold to him under the name of  
"Pink."

"Ho," said the man, "that isn't her  
name."

Suddenly he cried out sharply,  
"Nelly!"

Quick as a flash the horse pricked up  
her ears and looked around.

"Nelly," said the man, stepping in  
front of her, "shake hands!"

Up came the horse's right hoof for  
the man to take.

"Now give us the other hand, Nelly."  
And she raised her left forefoot.

"There!" said the smiling man;  
"d'ye suppose that wasn't my horse?"

—Our Dumb Animals.

## DOMESTIC ECONOMY.

## Hints to Housekeepers.

To prevent the irons from sticking  
to starched linen add a pinch of salt  
to the starch when mixing.

If a small box or jar, filled with lime,  
be kept uncovered in a cellar or pan-  
try, the air will be found dry and pure.

If one ounce of alum be added to the  
water used for rinsing children's frocks,  
pinafores or petticoats, they will be  
rendered unflammable.

Unless it is desirable to have a clear  
soup, it is a mistake to skim the soup  
kettle, the scum being the albumen set  
free from exposed parts of the meat.

Sour milk and soda for griddle cakes  
are liked by most housekeepers better  
than sweet milk and baking powder.  
For these sift a teaspoonful of soda  
into two cupfuls of flour and add a half  
teaspoonful of salt. Stir into the mix-  
ture 1½ cupfuls of sour milk and two  
well-beaten eggs. Bake the same as  
before.

Nickel plating must be kept quite  
dry and polished. For this purpose  
use a chamois leather, which should be  
wound around the nickel and pulled  
to and fro. If it gets very discolored  
clean with whiting or prepared chalk  
mixed to a paste with water to which  
a little ammonia has been added.

To remove varnish stains on cloth  
first moisten the spots with alcohol two  
or three times, then rub with a clean  
cloth, turning it as it gets dirty. If the  
color is injured sponge afterwards with  
chloroform to restore it, unless the  
color is blue, in which case vinegar is  
used instead. Remember that chloro-  
form must be used very carefully.

To preserve pears with ginger, cut  
eight pounds of pears into small pieces.  
Pare one-quarter pound of green gin-  
ger and cut it into small bits. Cut six  
lemons in the same way and use the  
rinds of two. Mix the pears, lemons  
and ginger, and add eight pounds of  
sugar and a cupful of cold water. Boil  
two hours, or until the fruit is clear.  
Keep the preserves in stone jars. This  
recipe has been used in a family for  
several years.

The following is a reliable remedy for

removing black heads: Take four  
ounces (a gill) of pure water and dis-  
solve in it as much as it will take up of  
common washing soda. Then mix into  
a paste with pure water, half an ounce  
of oxide of zinc and the same quantity  
of precipitated sulphur. At night  
moisten the affected parts with the  
soda solution, and before it dries cover  
the skin with a thin layer of the paste.  
In the morning wash with warm or  
tepid water. Use the remedy in this  
way for a week, and after that twice a  
week for a short time.

To give boards a beautiful appear-  
ance, after washing nicely with soda  
and warm water and a brush, wash  
them with a large sponge and clean  
water. Each time take care to leave  
no spot untouched, and clean straight  
up and down, not crossing from board to  
board; then dry with clean cloths rubbed  
hard up and down the same way. The  
floors should not be often wetted, but  
very thoroughly when done, and once a  
week dry rubbed with hot sand and a  
heavy brush the right way of the  
boards. The sides of stairs or passages  
on which are carpets or floor cloths  
should be washed with a sponge instead  
of linen or flannel, and the edges will  
not be spoiled. Different sponges should  
be kept for the above two uses; and those  
and the brushes should be well washed  
when done with and kept in a dry  
place.

## Educational.

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24 Post Street, San Francisco, Cal.

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25 Teachers, 60 Writing Machines, 17,000 Gradu-  
ates; over 300 graduates annually placed in po-  
sitions with the leading firms of the coast.

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Medal at Paris Exposition.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Oct. 23, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	70 3/4 @ 69 3/4	74 @ 73 1/4
Thursday.....	70 @ 70 3/4	73 3/4 @ 73 3/4
Friday.....	70 3/4 @ 71 1/4	74 @ 74 1/4
Saturday.....	70 3/4 @ 71 1/4	73 3/4 @ 74 1/4
Monday.....	71 1/4 @ 70 3/4	74 3/4 @ 73 3/4
Tuesday.....	70 3/4 @ 70 3/4	73 3/4 @ 74

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	35 1/4 @ 35 1/4	37 3/4 @ 37 3/4
Thursday.....	35 1/4 @ 35 1/4	37 3/4 @ 37 3/4
Friday.....	35 1/4 @ 35 1/4	37 3/4 @ 37 3/4
Saturday.....	35 1/4 @ 35 1/4	37 3/4 @ 37 3/4
Monday.....	35 1/4 @ 35 1/4	37 3/4 @ 37 3/4
Tuesday.....	35 @ 35 1/4	37 3/4 @ 37 3/4

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	97 3/4 @ 98 3/4	1 02 3/4 @ 1 03 3/4
Friday.....	99 @ 99 1/4	1 04 1/4 @ 1 04 1/4
Saturday.....	99 1/4 @ 99	1 04 1/4 @ 1 03 3/4
Monday.....	98 3/4 @ 98 1/4	1 03 1/4 @ 1 03 3/4
Tuesday.....	99 @ 99 1/4	1 03 1/4 @ 1 04 1/4
Wednesday.....	99 1/4 @ —	1 04 1/4 @ 1 03 3/4

## WHEAT.

As there has been a decline during the past fortnight in ocean freight rates of not less than five shillings per long ton, or over 5c. per cental, it would seem as though wheat should be bringing better prices. Beyond a check in the downward movement in values, however, the market for wheat has shown no appreciable change. The foreign markets have ruled weak, and declines in cereal prices abroad have absorbed a large portion of the drop here in ocean freight rates. As wheat had been previously crowded to low levels, affording no margin of profit for the average producer, and as ship owners have been making big money, the only place for further cutting was in the profits of ships engaged in the grain carrying trade of this coast. There is abundance of room for ocean freight rates from this port to drop to lower levels. Ships could profitably carry wheat at 6 or 7 shillings per ton less than the lowest figures yet established this season. If this cut was made and wheat received the full benefit, there would be nothing very encouraging for the producer, but it would be better than nothing. Prospects at the moment for any special firmness in grain circles being soon developed abroad are not bright. Private advices from Argentina report serious damage to crop by unfavorable weather. Market closed moderately firm.

California Milling.....	1 00 @ 1 03 3/4
Cal. No. 1 shipping, alongside.....	96 3/4 @ 97 1/4
Oregon Valley.....	96 3/4 @ 98 3/4
Washington Blue Stem.....	97 1/4 @ 1 03 3/4
Washington Club.....	95 @ 97 1/4
Off qualities wheat.....	90 @ 92 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	65 5/4 @ 65 5/4	55 10/4 @ 55 10/4
Freight rates.....	42 1/4 @ 45 1/4	33 3/4 @ —
Local market.....	97 1/4 @ 1 00	96 1/4 @ 98 3/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, 97 3/4 @ 99 1/4.
May, 1902, delivery, \$1.02 3/4 @ 1.04 1/4.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at 99 1/4 @ — c; May, 1902, \$1.04 1/4 @ 1.03 3/4.

## FLOUR.

Values are without quotable change, but the market is not noteworthy for firmness. There has been lately a fairly active movement, however, both on domestic account and for export, but more particularly the latter. The last two steamers for China took an aggregate of 43,100 barrels. Shipments of fair magnitude are being made to South America.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

Clearances of this cereal continue to be made for Europe, and some of the ships now loading are taking barley as part or

main cargo. While the outward movement for this season to date, over 80,000 tons, is heavier than the exports of wheat from this port since July 1st, and heavier than the shipments of barley for corresponding time last year, it is not up to the record of two years ago, over 90,000 tons of barley having gone outward during the first four months of the cereal year 1899-1900. Values are ruling tolerably steady at about same range previously quoted, but where full figures are paid, buyers are somewhat exacting as to quality.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	75 @ 82 1/4
Chevalier, No. 1 to choice.....	97 1/4 @ 1 02 1/4
Chevalier, poor to fair.....	75 @ 90

## OATS.

The market for this cereal has remained in all essential respects about the same as for several weeks past. Buyers are not as a rule taking hold very freely at full figures current, but it is the exception where they are able to obtain noteworthy concessions in their favor, especially on desirable qualities. Seed oats are jobbing at an advance on quotations.

White Oats, fancy feed.....	1 20 @ 1 25
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 17 1/2
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 22 1/2 @ 1 27 1/2
Black Russian.....	85 @ 1 15
Red.....	95 @ 1 20

## CORN.

Not much arriving, either domestic or imported, and values are at a rather high range, although the tendency is to lower levels, particularly on new crop California, which is beginning to arrive in small quantities, but is mostly too damp to be especially sought after.

Large White, good to choice.....	1 50 @ 1 60
Large Yellow.....	1 40 @ 1 50
Small Yellow.....	1 55 @ —
Eastern, in bulk (carload lots).....	1 52 1/4 @ 1 57 1/4

## RYE.

Not much arriving, but there is more offering than there is immediate demand for. Values show no improvement.

Good to choice, new.....	77 1/4 @ 80
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## BUCKWHEAT.

The demand is slow and market is lacking in firmness. There are, however, no large quantities offering.

Good to choice.....	1 45 @ 1 60
---------------------	-------------

## BEANS.

With free arrivals of new crop beans and considerable pressure to realize, the market is weak, more particularly for such varieties as are in largest supply. Offerings of white beans are principally Lady Washingtons, while in the line of colored beans, Bayos and Pinks constitute the bulk of present stocks. Limas are not in large spot supply, but are being offered in wholesale quantity to arrive. Threshing is now under full headway and is being pushed as rapidly as possible in the southern coast counties, as also in the Sacramento river section.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	3 25 @ 3 50
Lady Washington.....	2 20 @ 2 40
Pinks.....	2 25 @ 2 40
Bayos, good to choice.....	2 25 @ 2 50
Reds.....	3 00 @ 3 25
Red Kidney.....	3 50 @ 4 00
Limas, good to choice.....	4 40 @ 4 75
Black-eye Beans.....	3 00 @ 3 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

The market is overstocked with Green or Blue Peas, and values for the same are for the time being poorly defined, most of the millers not caring to take hold just now at any figure. Niles Peas are in fair request, and for strictly choice little or no trouble is experienced in realizing full current rates.

Green Peas, California.....	1 25 @ 1 75
Niles Peas.....	1 50 @ 1 60

## WOOL.

Not much doing in this center. Values are without quotable change, but to effect sales of coarse and medium wools, concessions would have to be granted buyers. Only on fine wools are prevailing values being well sustained, and these have to be bright and free to draw forth any active or competitive bidding. Most of the scouring mills are running, being fairly stocked through previous purchases.

## SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Humboldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 11
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 1/2 @ 8 1/4
San Joaquin Lambs.....	7 1/4 @ 9

## HOPS.

The local market is not displaying much life, neither is it noteworthy for firmness. Sellers and buyers continue more or less apart in their views. To sell freely less than current quotations would have to be accepted, although growers in numerous instances are holding for higher figures than below noted.

Good to choice, 1901 crop.....	10 @ 13
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## HAY AND STRAW.

There is a fairly active demand for both stable and cow hay. Most of the large stables and barns in the city are still short on winter supplies, and are endeavoring to get vacant space filled before heavy rains set in. Values for all desirable hay are higher, and market is firm at current rates for choice to select grades. Defective qualities have to go at rather low figures, there being little positive inquiry for hay of this sort.

Wheat, good to choice.....	8 00 @ 12 50
Wheat and Oat.....	8 00 @ 11 50
Oat.....	6 50 @ 9 50
Barley and Oat.....	6 00 @ 8 50
Barley.....	5 50 @ 8 00
Alfalfa.....	8 00 @ 10 00
Clover.....	6 50 @ 8 00
Stock.....	5 00 @ 6 00
Compressed.....	8 00 @ 12 00
Straw, 3/4 bale.....	35 @ 47 1/2

## MILLSTUFFS.

Market for Bran is slow declining, although it is weak, with downward tendency, stocks being on the increase. Other mill offal ruled quiet at practically unchanged rates. Values for Rolled Barley and Milled Corn remained quotably as before, although market for latter is weak.

Bran, 3/4 ton.....	19 50 @ 20 00
Middlings.....	20 00 @ 21 00
Shorts, Oregon.....	19 50 @ 20 50
Barley, Rolled.....	16 50 @ 17 00
Cornmeal.....	— @ 34 00
Cracked Corn.....	— @ 35 00

## SEEDS.

Mustard Seed is ruling steady, with a moderate movement, both on foreign and local account. In bird seed there is not much doing, prices continuing quotably as previously noted.

Flax.....	2 65 @ 3 25
Mustard, Yellow.....	3 15 @ 3 25
Mustard, Trieste.....	2 85 @ 3 00

Canary.....	3 1/4 @ 3 1/4
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/4

## BAGS AND BAGGING.

Market throughout is inactive and featureless, a condition generally experienced at this time of year.

Calcutta Grain Bags, spot.....	7 1/4 @ —
San Francisco Grain Bags, 22x36, spot.....	7 @ —
Wool Sacks, 4 lbs.....	35 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 34
Fleece Twine.....	8 1/4 @ —
Gunnies.....	— @ —
Bean Bags.....	5 1/2 @ 5 3/4
Fruit Sacks, cotton, three sizes.....	5 1/2, 6, 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/2

## HIDES, PELTS AND TALLOW.

Hides are in fair request and market is moderately firm at prevailing rates. Pelts are selling at unchanged figures, but are not in active demand. Tallow of prime to choice quality sells readily and values for same are well sustained.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	11 @ —	9 1/4 @ —
Medium Steers, 48 to 56 lbs.....	10 @ —	8 1/4 @ —
Light Steers, under 48 lbs.....	9 @ —	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 @ —	8 @ —
Light Cow Hides, under 50 lbs.....	9 @ —	8 @ —
Stags.....	6 1/2 @ —	— @ —
Wet Salted Kip.....	9 @ —	8 @ —
Wet Salted Veal.....	9 @ —	8 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	15 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 75 @ —	— @ —
Salted Horse Hides, medium.....	2 25 @ —	— @ —
Salted Horse Hides, small.....	1 25 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 25 @ —	— @ 1 25
Dry Colts' Hides.....	50 @ —	— @ —
Pelts, long wool, 3/4 skin.....	75 @ 100	— @ 100
Pelts, medium, 3/4 skin.....	50 @ 75	— @ 75
Pelts, short wool, 3/4 skin.....	30 @ 40	— @ 40
Pelts, shearling, 3/4 skin.....	10 @ 25	— @ 25
Deer Skins, best summer.....	35 @ —	— @ —
Deer Skins, good medium.....	— @ 30	— @ 30
Deer Skins, thin winter.....	— @ 23	— @ 23
Elk Hides.....	10 @ 12	— @ 12
Tallow, good quality.....	5 @ 5 1/4	— @ 5 1/4
Tallow, No. 2.....	4 @ 4 1/4	— @ 4 1/4
Goat Skins, perfect.....	30 @ 37 1/2	— @ 37 1/2
Goat Skins, small.....	10 @ 20	— @ 20
Kid Skins.....	5 @ 10	— @ 10

## HONEY.

In the matter of quotable values there are no changes to note, but market is moderately firm at current rates. There are no large stocks in this center and no heavy quantities offering to arrive.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/4 @ —
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7

## BEESWAX.

Market is lightly stocked, and that offerings will be in excess of the demand at any time this season is not probable.

Good to choice, light, 3 lb.....	28 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Quotable values throughout and the general tone remain virtually the same as last noted. Prices quoted for Beef and Mutton represent figures charged by slaughterers for whole carcasses. Quotations for Hogs are based on prices paid by packers.

Beef, first quality, dressed, net 3 lb.....	6 @ 5 1/4
Beef, second quality.....	6 @ —
Beef, third quality.....	5 1/2 @ —
Mutton—ewes, 6 wts; wetbers.....	6 1/4 @ 7
Hogs, hard grain fed, medium.....	5 1/2 @ 6
Hogs, small, fat.....	5 1/2 @ 6
Hogs, large, bard.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	7 1/4 @ 7 1/4
Veal, small, 3 lb.....	7 @ 9
Veal, large, 3 lb.....	7 @ 9
Lamb, spring, 3 lb.....	7 1/4 @ 8

## POULTRY.

For most kinds of poultry the market has inclined against sellers the greater part of the week. Eastern poultry was in entirely too free receipt to admit of average offerings of domestic being placed advantageously. Large and fat Hens, Small Broilers in fine condition and choice Young Turkeys were about the only sorts specially inquired for. Pigeons were not in heavy receipt and met as a rule with prompt sale at steady values.

Young Turkeys, full grown.....	13 @ 15
Hens, California, 3 dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	3 50 @ 4 50
Fryers.....	3 25 @ 3 50
Broilers, large.....	3 25 @ 3 50
Broilers, small.....	3 00 @ 3 25
Ducks, old, 3 dozen.....	3 00 @ 3 50
Ducks, young, 3 dozen.....	3 50 @ 4 50
Geese, 3 pair.....	1 50 @ 1 75
Goslings, 3 pair.....	1 75 @ 2 00
Pigeons, old, 3 dozen.....	1 25 @ 1 50
Pigeons, young.....	1 75 @ 2 00

## BUTTER.

Market for fresh butter was slow, and concessions to buyers were of common occurrence, especially on other than most select qualities. Both jobbers and retailers are making effort to work down as rapidly as possible their holdings in cold storage.

Creamery, extras, 3 lb.....	28 @ —
Creamery, firsts.....	24 @ —
Creamery, seconds.....	21 @ 22
Dairy, select.....	23 @ 24
Dairy, firsts.....	20 @ 21
Dairy, seconds.....	18 @ —
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll, 3 lb.....	19 @ 21
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/4

## CHEESE.

Mild now is in light stock and is being favored with a firm market, some sales being made above quotations. There are fair supplies of cheese sufficiently seasoned to be a little "sharp" in taste, with values steady for this description.

California, fancy fat, new.....	11 1/4 @ 12 1/4
California, good to choice.....	10 1/4 @ 11 1/4
California, fair to good.....	9 1/4 @ 10 1/4
California, "Young Americas".....	12 1/4 @ 13 1/4

## EGGS.

For a few strictly fancy eggs 40 @ 41c. was realized, but these figures were hardly warranted as a quotation. Most sales of fresh eggs direct from henneries were within range of 32 1/2 @ 37 1/2 c., as to size and color. For the average offerings of store-gathered eggs 25c. was a full quotable figure.

California, select, large, white and fresh.....	39 @ 40
California, select, irregular color & size.....	32 1/4 @ 37 1/4
California, good to choice store.....	25 @ 30
California, common to fair store.....	20 @ 24 1/2
Eastern, good to choice.....	22 @ 25
Cold Storage.....	20 @ 25

## VEGETABLES.

Onions were in only moderate receipt, and market was a little more favorable to sellers than previous week, although in the matter of quotable rates there were no special changes effected. Lima Beans were in increased receipt and lower. Tomatoes were in too large supply for the retail trade and not in sufficient quantity to justify canners taking hold. The market for most other vegetables in season was in the main quiet and presented a generally easy tone.



Egg Plant, per box.....	40 @ 50
Garlic, per lb.....	2 1/4 @ 3 1/4
Okra, Green, per box.....	40 @ 50
Onions, Yellow Danver, per cental.....	1 00 @ 1 25
Peas, Sweet garden, per lb.....	2 @ 3
Peppers, Green Chile, per sack.....	50 @ 65
Peppers, Bell, per box.....	60 @ 75
Squash Summer, per small box.....	— @ —
Summer Squash, Bay, per large box.....	35 @ 50
Tomatoes, per large box.....	20 @ 35
Tomatoes, per small box.....	— @ —

POTATOES.

There has been a material recovery in the shipping trade from the recent dullness. Reductions in asking prices have resulted in drawing forth shipping orders this week about sufficient to absorb all immediate offerings of desirable shipping stock. Sales for shipment were mainly of Sacramento river potatoes within range of 65@75c. Business at higher values was principally in superior qualities and on local account.

Burbanks, Salinas, per 100 lbs.....	1 15 @ 1 40
River Burbanks in sacks, per cental.....	50 @ 85
Mission Garnet Chile, in sacks.....	90 @ 1 20
Sweets, new, per cental.....	50 @ 90

The Fruit Market.

FRESH FRUITS.

In the line of deciduous fruits, the Apple now takes the lead, and this will continue to be the case during the balance of the season. Choice to select Apples, free from worm, moth or other blemish, are not plentiful, and market for such stock shows firmness, with demand good, more for shipment, however, than on local account. A little later on, with cooler weather, the local inquiry will be more active. Pears of the late varieties are in fair supply, and when of high grade do not lack for custom at tolerably stiff figures, about the same as are current on Apples of like quality. Peaches are nearly out of stock; desirable qualities are quotably higher, but trade is mostly of a retail order. Table Grapes other than Seedless were in more than ample supply for the immediate demand, and prices averaged lower than last quoted. Wine Grapes of choice quality were in light supply; defective qualities were in poor demand. Berries of the cultivated varieties were not in large receipt, but demand was rather slow, and it was the exception where what could be termed good prices were obtainable. Melons were in fair request the past few days, owing to warm weather, but the uncertainty as to the future caused buyers to be extremely cautious about stocking up ahead.

Apples, fancy, per 4-tier box.....	1 25 @ 1 50
Apples, good to choice, per 50-lb. box.....	50 @ 1 00
Apples, common to fair, per 50-lb. box.....	35 @ 50
Apples, green, per 50-lb. box.....	35 @ 60
Cantaloupes, per crate.....	60 @ 1 25
Figs, per 2-layer box.....	65 @ 80
Grapes, Cornechon, per crate.....	50 @ 75
Grapes, Isabella, per crate.....	50 @ 75
Grapes, Black, per crate.....	35 @ 60
Grapes, Muscat, per crate.....	35 @ 60
Grapes, Tokay, per crate.....	35 @ 60
Grapes, Zinfandel, per ton.....	28 00 @ 31 00
Grapes, White, per ton.....	20 00 @ 26 00
Nutmeg Melons, per crate.....	40 @ 75
Peaches, per box.....	75 @ 1 00
Pears, Winter Nellis, per 40-lb. box.....	75 @ 1 25
Pears, other kinds, per box.....	40 @ 75
Persimmons, per box.....	75 @ 1 00
Pomegranates, per box.....	50 @ 75
Quinces, per box.....	40 @ 65
Raspberries, per chest.....	4 00 @ 6 00
Strawberries, Longworth, per chest.....	6 00 @ 7 00
Strawberries, Large, per chest.....	3 50 @ 5 00
Watermelons, per 100.....	4 00 @ 15 00
Whortleberries, per lb.....	5 @ 7

DRIED FRUITS.

The market for cured and evaporated fruits continues quiet, movement being light, either for shipment or on local account. As stocks in most of the Eastern centers are understood to be light, it is believed that as soon as the weather becomes cooler there will be more demand from the East. Supplies, other than Prunes, Apples and Raisins, are mainly in the hands of the wholesale and jobbing trade, and for stock thus held values are ruling steady. Wholesale dealers and distributors are not showing much eagerness to buy at present, especially at full figures, preferring to reduce rather than to increase holdings. In consequence of the slow movement, small and irregular sized lots offering from the outside are obtainable at materially lower figures than straight carloads. Quotable values for evaporated Apples are marked down half a cent, the market showing weakness in sympathy with recent declines East. The Prune situation remains muddled, with a variety of low prices quoted, but no evidence of much business. Quotations for the four sizes range all the way from 2 1/4 @ 3 1/4, the inside figure being for last crop, while the outside price is being asked by graders for early deliveries of new Santa Claras.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 @ 7 1/4
Apricots, Royal, choice, in sacks, per lb.....	8 @ 8 1/4
Apricots, Moorpark.....	10 @ 12 1/4

Apples, in 50-lb boxes, rings, pressed, fancy.....	7 @ 7 1/4
Apples, 50-lb boxes, rings, pressed, good to choice.....	5 1/4 @ 6
Figs, pressed.....	5 @ 7 1/4
Nectarines, per lb.....	5 @ 6 1/4
Peaches, unpeeled, fancy.....	7 @ 7 1/4
Peaches, unpeeled, choice.....	6 @ 6 1/4
Peaches, peeled, in boxes.....	12 @ 14
Pears, halves, choice to fancy.....	6 @ 8 1/4
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	5 @ 6
Prunes, 4 sizes, in bags, 3 @ 3 1/4 c; 50-80s, 4 1/4 @ 4 1/4 c; 60-70s, 3 1/4 @ 4 c; 70-80s, 3 1/4 @ 3 1/4 c; 80-90s, 2 1/4 @ 3 c; 110s and less, 2 @ c.; these figures for 1901 crop; Old Prunes, 1/2 @ 1/4 c. less.	

COMMON SUN-DRIED.

Apricots.....	6 @ 6 1/2
Apples, sliced.....	3 1/4 @ 4 1/4
Apples, quartered.....	3 1/4 @ 4 1/4
Figs, Black.....	2 1/4 @ 3
Figs, White.....	2 1/4 @ 3 1/4
Peaches, unpeeled.....	5 @ 6
Pears, prime halves.....	5 @ 6
Plums, unpitted, per lb.....	1 1/4 @ 2 1/4

RAISINS.

There is a fairly active movement in new crop Raisins at the low figures recently established. Prices of the Association as now fixed are 1/4 @ 1/2 c lower on loose Muscatels than prices named by the Raisin Exchange. Seedless Muscatels are quoted at 4 1/4 c and Seedless Sultanas at 5 1/2 c by the Association, as against 5 c for the former and 6 c for the latter, the figures named by the Exchange. Association prices on 2 and 3-crown London layers are 15 c under the Raisin Exchange figures.

Following are the prices for new crop, as fixed by the Fresno Association and the Raisin Exchange:

Descriptions.	Ass'n.	Ex.
Loose Muscatels—	Per lb.	Per lb.
4-crown.....	4 1/4 c	5 1/4 c
3-crown.....	4 1/2 c	5
2-crown.....	3 3/4 c	4 1/4
Seedless Muscatels.....	4 1/4	5
Seedless Sultanas.....	5 1/4	6
Thompson's Seedless.....	6 1/2	..
Bleached Sultanas—		
Fancy.....	8 1/4	..
Choice.....	7 1/4	..
Standard.....	6 1/4	..
Prime.....	5 1/4	..
Bleached Thompson's—		
Extra Fancy.....	11	..
Fancy.....	10	..
Choice.....	9	..
Standard.....	7 1/4	..
Prime.....	6 1/4	..
Seeded—		
Fancy.....	6 1/4	..
Choice.....	5 1/4	..
Clusters—	20-lb. bxs.	20-lb. bxs.
Imperial.....	\$3 00	\$3 00
Debesa.....	2 50	2 50
Fancy.....	1 75	..
4-crown.....	1 60	..
London Layers—		
2-crown.....	1 10	1 25
3-crown.....	1 20	1 35
4-crown.....	..	1 75

CITRUS FRUITS.

Old Valencias and new or intermediate crop Navels are both offering in moderate quantity, with market moderately firm for choice of both kinds, so far as views of holders are concerned, but demand is not active at prevailing values. Lemons ruled steady and were in fair request, but supplies were ahead of immediate requirements. Limes were rather firmly held, with stocks light.

Oranges—Navels, per box.....	3 50 @ 4 50
Valencias, per box.....	3 00 @ 4 25
Lemons—California, select, per box.....	2 75 @ 3 00
California, good to choice.....	1 75 @ 2 25
California, common to fair.....	1 00 @ 1 50
Grape Fruit, per box.....	3 00 @ 4 00
Limes—Mexican, per box.....	6 00 @ 7 00

NUTS.

Almonds are slow and against sellers. The little business doing from first hands is mainly at cuts under quotations. The market for Walnuts is firm, with demand fair and prospects that all No. 1 stock will meet with a moderately prompt market at current rates. New Chestnuts are lower, most of the present offerings showing poor keeping qualities.

California Almonds, shelled.....	18 @ 22
California Almonds, paper shell, per lb.....	11 1/4 @ 12 1/4
California Almonds, soft shell.....	8 @ 10
California Almonds, hard shell.....	6 @ 7
Cal. White Walnuts, No. 1 soft shell.....	9 1/4 @ —
Cal. White Walnuts, No. 2 soft shell.....	7 1/4 @ —
Cal. White Walnuts, No. 1 hard shell.....	9 @ —
Cal. White Walnuts, No. 2 hard shell.....	7 @ —
Cal. Chestnuts.....	8 @ 12 1/4
Peanuts, California, fair to prime.....	4 1/4 @ 5 1/4
Peanuts, Eastern, hand-picked.....	5 1/4 @ 6
Pine Nuts.....	5 @ 6

WINE.

The market shows a healthy tone, but in the absence of noteworthy offerings from first hands, there is little for the moment upon which to base quotations for dry wines of either this or last season's vintage. This year's wines are not yet ready for market, and last season's product is practically all in second hands. Indications are that the market for this year's dry wines will open at not less than 20@25c. per gallon wholesale, as to quality, quantity and location. Nominal wholesale values for last year's dry wines may be said to be 25@30c. per gallon, and

it would be an easier matter to sell than to buy at this range.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.....	236,031	2 039,805
Wheat, centals.....	476,444	1,766,358
Barley, centals.....	144,460	2,313,976
Oats, centals.....	46,490	403,063
Corn, centals.....	920	20,208
Rye, centals.....	790	16,185
Beans, sacks.....	41,658	163,116
Potatoes, sacks.....	25,538	440,060
Onions, sacks.....	8,890	104,743
Hay, tons.....	3,234	49,054
Wool, bales.....	3,823	30,115
Hops, bales.....	1,231	3,530

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.....	180,600	1,565,632
Wheat, centals.....	382,182	1,511,819
Barley, centals.....	32,508	1,594,420
Oats, centals.....	544	2,074
Corn, centals.....	..	7,992
Beans, sacks.....	7,831	10,566
Hay, bales.....	3,564	4,573
Wool, pounds.....	57,500	398,816
Hops, cases.....	609	123,040
Honey, cases.....	453	2,532
Potatoes, pack's.....	1,909	12,995

California Dried Fruit at New York.

NEW YORK, Oct. 23.—Evaporated apples, common, 5 1/4 @ 7 1/4 c; prime wire tray, 8 @ 8 1/4 c; choice, 8 1/4 c; fancy, 9 @ 9 1/4 c. California Dried Fruits.—The light trading in progress is at generally unchanged values. Prunes, 3 1/2 @ 7 c. Apricots, Royal, 8 1/4 @ 12 1/4 c; Moorpark, 9 @ 13 c. Peaches, unpeeled, 6 @ 9 1/4 c; peeled, 11 @ 15 c.

A Healthy Home

A house that is sheathed with P & B Building Paper will be warm in winter, cool in summer and healthy all the year round. P & B Building Paper is placed between walls and floors of frame buildings—it keeps out gases, odors, moistures, vermin and insects.

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We claim the Non-Srinkable Tank with water channels to be the most perfect in the market. There are two transverse bores all around the tank in the middle of the stave, one near the top and one near the bottom. The staves are all grooved from the top hole to the bottom hole, which insures the filling of water between every stave. This will keep the staves water-soaked without regard to whether there is water in the tank or not, so the oil can be pumped completely out of the tank and left to stand for a period; and when the tank is again filled with oil there will be a tight tank, because of the water in the channels and transverse holes of the staves keeping them moist and prevents leaking. There is no possibility for the water to mix with the oil, because the water can be discharged to whatever place is desired. In mining tanks there is no loss of solution with these water channels.

Personal.

THE nitrate of soda propaganda has secured the services of Prof. W. S. Myers of Rutgers College, N. J., to take charge of their interests in the United States. Prof. Myers is no kin to the late Dr. John A. Myers, who represented this company. Prof. Myers is well equipped for his new duties, having been associated with Prof. E. B. Voorhees in the New Jersey Experiment Station and fertilizer work for a number of years.

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PATENTS

Our U. S. and Foreign Patent Agency presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, our Washington branch which tends exclusively to our business before the Patent Office, intimate acquaintance with the subjects of inventions in our own community, and our most extensive reference library, containing official American reports since 1790, with full copies of U. S. Patents since 1872. All worthy inventions patented through DEWEY, STRONG & Co.'s Patent Agency will have the benefit of a description in the *Mining and Scientific Press*. We transact every branch of patent business, and obtain patents in all countries which grant protection to inventors. The large majority of U. S. and foreign patents issued to inventors on the Pacific Coast have been obtained through our agency. We are conservative and counsel preliminary examinations in cases of doubtful novelty. Guide to inventors sent on request.

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—AND—

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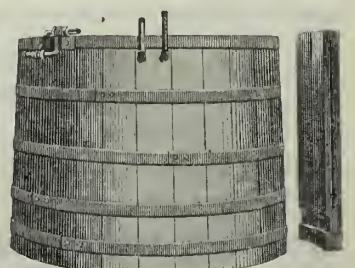
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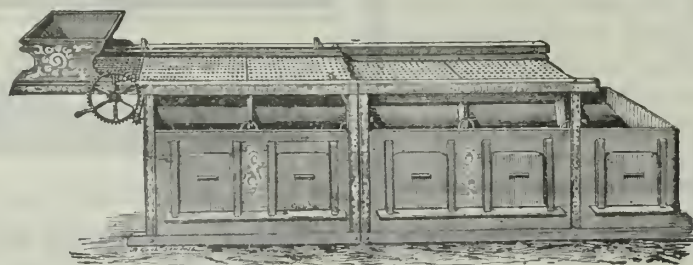


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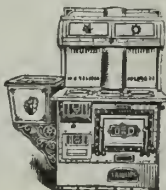
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## THE VETERINARIAN.

Answers by Dr. Boomer.

**TO THE EDITOR:**—A Jersey cow of mine calved twelve days ago (second calf), but as yet has not come to her milk. Previous to calving she had the run of barley stubble and was fed hay (alfalfa) twice a day. She calved on time. She was milked up to time of calving. Her condition is good. She eats as she always did and I can not see that anything is wrong with her. The last day or two I have been feeding her on bran mash twice a day. Can you tell me of a way to bring her to her milk?—A CONSTANT READER.

The treatment of this condition will consist principally of judicious feeding of good, nutritious food. The teats should be frequently stripped and the udder rubbed either dry or with camphorated oil. I should like to hear more of the case. Let me know the condition of the udder, if a flow of any kind is produced when you attempt to milk her, her age, and also if her pains were severe during labor. The loss of milk is a symptom of many diseases.

### KNUCKLING.

**TO THE EDITOR:**—I have a horse troubled with what is called cocked ankle. I would like to know through the veterinary column of the PACIFIC RURAL PRESS what to do for it.—A SUBSCRIBER.

Knuckling is a sequel of other diseased conditions. It may be relieved by shoeing. Prepare the foot for shoeing by shortening the toe as much as possible, leaving the heels high. The shoe should be thin at the toe and swelled at the heels or with corks. If this doesn't relieve your horse an operation will be necessary.

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All the horses, without reserve, on Jesse D. Carr's Gablian Stock Farm, Salinas, Cal., are offered for immediate sale. This affords a good chance to get a brood mare a weanling, a two or three-year old, at favorable figures. These are high-class horses. The most of the mares were foaled by Boodle Jr., a stallion held by many good judges to be as fine a bred horse as any in the State; dam by Electioneer, grand dam by Carr's Membrino. Boodle Jr. is by old Boodle, whom O. A. Hickok pronounced to be the finest bred horse on the coast. Send for lists and other required information to **J. D. Carr, Salinas, Cal.**

# HIGHEST AWARD CREAM SEPARATORS BUFFALO EXPOSITION.

Just as in the case of every representative exhibition or other contest since the invention of the Cream Separator twenty years ago, the De Laval machines have maintained their supremacy at the Pan-American Exposition, Buffalo, having received the Gold Medal on Cream Separators.

This is the highest and only award of its kind on Cream Separators. The Sharples machines received a Silver Medal. The Vermont Farm Machine Co. received a Gold Medal for its combined exhibit of cream separators, Babcock testers, churns and other apparatus, and A. H. Reid a Bronze Medal for a similar exhibit. With characteristic advertising honesty, the Vermont Company is claiming this Gold Medal to be an award to its "U. S." Separators.

The jury of awards on cream separators consisted of Dr. S. M. Babcock of the University of Wisconsin, the famous dairy authority and inventor of the test bearing his name, and Prof. H. W. Spangler of the Franklin Institute, Philadelphia. This jury awarded the Gold Medal to the De Laval machines, a Silver Medal to the "U. S." machines (Vermont Farm Machine Co.), and a Bronze one to the Sharples machines. But the after "pulling and hauling," which unsuccessful exhibitors always resort to in an exhibition contest of this character, finally resulted in the general award authorities granting awards as above announced.

In the Model Dairy at Buffalo the work of the De Laval machines was in keeping with their recognized superiority in ordinary dairy practice. Four makes of separators were offered opportunity to set in machines. Two of these, the Sharples and Reid, evaded doing so. Of the third a prominent dairy expert writing under date of October 10th says: "I hear that neither natural gas nor soft coal would make enough steam, so that they had to use wood and coke to run the 'U. S.' machine, keeping water ready to put out the fires that had been started two or three times in the roof of the engine house by the heat from the smokestack,"—the machine being one of those "light" running "dairy" turbines of the make in question, which like the other sizes of such separators run as easy "on paper" as the De Laval machines.

## OTHER GREAT EXPOSITIONS.

The supremacy of the De Laval machines at Buffalo is a continuation of their triumphant record at all previous great expositions. At the World's Fair, Chicago, in 1893, they received the Gold and only medal awarded by the regular jury of awards and were the only separators used in the Model Dairy. At Antwerp in 1894 and at Brussels in 1897 they received the Grand Prizes or highest awards. At Omaha in 1898 they received the Gold Medal, and again at Paris in 1900 the Grand Prize or highest award.

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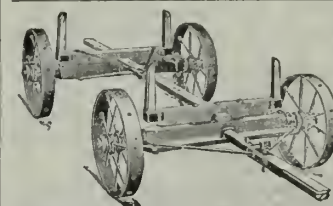
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A list of all of the stock on the ranch is being prepared. The stock can be seen at the ranch, and lists and further information can be had by addressing

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ALL WELL-KNOWN, SUCCESSFUL REMEDIES. WRITE FOR PARTICULARS AND PROOFS OF SUCCESS. FREE SAMPLE OF DIP AND DISINFECTANT SENT UPON REQUEST. BEWARE OF DANGEROUS IMITATIONS OF OUR VACCINES.

**EMERY'S BEEF, BLOOD & BONE****FOR POULTRY.**

Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are big. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

**N. OHLANDT & CO., INDIANA AND YOLO STS., SAN FRANCISCO, CAL.**

**HOLSTEIN CATTLE.**

**SLEEPY HOLLOW RANCH, SAN ANSELMO, MARIN CO., CAL.**  
**ALL THE LEADING FAMILIES OF THE BREED.**

Every Sire directly imported from Herds of the Greatest Eastern Breeders.

Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams.

Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.

**STATE FAIR VISITORS**

knew good pigs when they saw them and our sales were much larger than in any other year, which has reduced our stock to a small number.

We have a few pigs ready to ship and other litters coming on.

We won a large number of premiums which show the character of the herd. We still claim to have the best large herd on the coast and are adding new animals when we find good ones.

Persons wanting good pigs should get in their order early to get a choice of litters.

Correspondence solicited.

**SESSIONS & CO., 117 E. 23rd St., LOS ANGELES, CAL.**

**HUMBOLDT STOCK FARM,**  
JOSEPH MARZEN, PROPRIETOR.  
**Breeder of SHORTHORN AND HEREFORD CATTLE.**  
Young Stock for Sale. **LOVELOCK, NEVADA.**

**REAL ESTATE AGENCY,**

**SAN LEANDRO,**  
ALAMEDA COUNTY, CALIFORNIA.

This vicinity is the best in the State for HOMES AND INVESTMENTS. Six miles south of Oakland and fifteen from San Francisco. For information write

**J. LINFOOT & CO., San Leandro, California.**

Established 20 Years.

Incorporated in 1900.

**The W. A. Mackinder Co.**  
(Incorporated)

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**REAL ESTATE,**  
**ST. HELENA,**

**NAPA COUNTY, CALIFORNIA.**

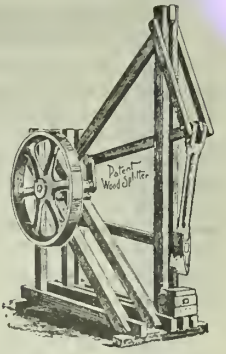
Send for free copy Napa County Viticulturist, containing Property List.

**The Wise Wood Splitter.**

Has Been Thoroughly Tested.

Portable or Stationary, and does the work of 8 men, with axes.

Manufactured by  
**I. A. COONRADT & SON,**  
717 2d St., Oakland, Cal.

**Southern Pacific. SHORT LINE**

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**EAST to CALIFORNIA.**

**FEWEST MILES**

AND

**FEWEST HOURS**

Perfectly Conducted Tourists' Excursions from Principal Cities of the East in New Upholstered Tourist Cars.

**SPLENDID LIMITED TRAIN SERVICE** via **OGDEN** and via **NEW ORLEANS.**

Ask near **SOUTHERN PACIFIC** agent for supply of California literature to send friends in the East.

Subscribe for **SUNSET**, a magazine of the border; published solely in the interest of California, \$1.00 per year, any agent.

**E. O. McCORMICK,**  
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**T. H. GOODMAN,**  
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**GLENN RANCH,**

Glenn County, : : : California,

**FOR SALE**

In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

**F. C. LUSK,**

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

**J. H. BOKE.**

**T. N. MOUNT,**  
Notary Public and  
Record Searcher.

**MOUNT & BOKE,**  
**Real Estate, Insurance,**  
**\* RECORD SEARCHING, \***

**NAPA, CAL.**

Have a large and complete line of fine properties for sale or exchange.

Twenty years' experience in our line of business in Napa county puts us in the front rank and makes it advantageous to purchasers to call on or correspond with us before buying.

**CONTRA COSTA COUNTY LAND FOR SALE.**  
Send for list. **D. J. WEST, Martinez, Cal.**



### Care of the Hair.

In the hot weather the hair needs more attention than any other part of the dermal system. The excessive perspiration of the scalp in summer collects dust and causes dandruff. In order to prevent the pores from being clogged by effete matter the greatest attention should be paid to cleanliness, to the exercise of the little muscles of the skin and the ventilation of the hair shafts. In addition to this, the ends of the hair should be frequently clipped.

In washing and brushing the hair, it is well to remember that the epidermis and corium of the scalp are not supported by a thick layer of sub-tissue as is the rest of the skin of the body. So in washing and drying the hair one's eagerness to be clean should not cause one to scrub the head as if strength was the one essential in obtaining good results.

Oftentimes one reads in "Steps to Beauty" that brushing the hair every night will develop the muscles of the neck and arms, and at once the homely woman who wishes to be beautiful seizes a hair brush, and even takes one in each hand for symmetry's sake, and goes through a regular Indian club exercise on her head. After some months faithful devotion to the cause of muscle, she proudly shows a finely rounded arm; but, alas, the hair is but a wisp! It is friction of the scalp, gentle and regular, that acts as a tonic. Brushing the hair will not affect the scalp, and the old saying that "You cannot brush the scalp too much or the hair too little" is to be heeded.

The hair needs air as well as brushing. The custom of braiding it at night is conducive to bad results. It may be a little uncomfortable to have one's tresses flying around the face; but if one throws it over the pillow, it will not interfere with one's comfort after the first few nights. It will be surprising to find what good results will come from this habit of allowing the hair freedom from twists and braids and hairpins.

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING OCTOBER 8, 1901.

683,899—PRESERVING FOOD—S. Bishop, S. F.  
684,045—WATER WHEEL—F. H. Cook, Mead, Wash.  
684,052—SNOW REMOVER—H. S. Farquhar, S. F.  
684,211—FISH HOOK—W. F. Ferch, Los Angeles, Cal.  
683,924—ELEVATOR SYSTEM—E. M. Fraser, S. F.  
684,363—WELL CASING—F. A. Garbutt, Los Angeles, Cal.  
684,369—TEXTILE FABRIC—W. A. Hagans, Los Angeles, Cal.  
684,233—WRENCH—W. T. Hatten, Heppner, Or.  
684,364—SPEED GOVERNOR—C. A. Huffmaster, San Leandro, Cal.  
684,258—CONCRETE BEAM—P. H. Jackson, S. F.  
684,275—CAN HEAD COATING MACHINE—A. W. Livingston, S. F.  
685,075—WEIGHING MACHINE—Mackey & Gilbert, Ridgefield, Wash.  
684,292—DARK ROOM—T. McCusker, Portland, Or.  
684,293—BURIAL CASKET—J. C. F. McGriff, S. F.  
684,297—HINGE—O. Niehaus, West Berkeley, Cal.  
684,307—ENGINE—P. H. Reardon, S. F.  
683,987—ROTARY ENGINE—M. J. Robinson, Los Angeles, Cal.  
684,384—INK WELL—D. H. Rowe, East Oakland, Cal.  
684,311—BOAT—S. Rujl, S. F.  
684,312—GARMENT HOLDER—J. D. Rush, San Diego, Cal.  
684,116—MOP—C. E. Shaw, Spokane, Wash.  
684,332—MOTOR VEHICLE—A. C. Stewart, Santa Paula, Cal.  
684,006—GAUGE—G. Stout, Pomona, Cal.  
683,324—BALING PRESS—T. J. Thorp, Forestgrove, Or.  
684,154—WEED CUTTER—J. D. Whitman, Medford, Or.  
35,175—DESIGN—J. P. Budd, Everett, Wash.

ONE CROP THE FROST DIDN'T NIP.—Red Bluff News: Charles Cofer has finished his fruit drying at the Summit

ranch. He has from this year's crop twelve tons of dried peaches and between twelve and fifteen tons of dried prunes. His largest previous peach crop amounted to only eight tons. It seems strange that Mr. Cofer should have had such a large crop of fruit this year when the fruit of nearly all other orchards in this county was killed by frost; but, nevertheless, it is a fact that he had the largest crop he ever raised, and the only way to account for it is that his orchard has a higher elevation than any in the valley. As a comparison, the 250-acre orchard of James Barry, on low bottom land near Cottonwood creek, may be taken. In this extensive orchard only enough fruit for the family use was gathered this year.

SUMMER FEED FOR COWS.—Livermore Herald: One of the greatest difficulties that confronts the California farmer who desires to get the best results from his cows in summer and fall is the lack of green feed. T. D. Carneal, manager of the Martin ranch, has a practical solution of this problem and demonstrates it by actual results. He gets the same amount of butter from a given number of cows in the fall that he does in the spring and but little greater labor and expense. He does it by feeding Egyptian corn, which is planted in the spring and remains green throughout the summer and autumn months. A small patch will feed a large number of cows. Mr. Carneal says that corn alone will not keep the cows in good condition and advises the addition of chopped feed.



**Soft Harness**

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**EUREKA Harness Oil**

makes a poor looking harness like new. Made of pure, heavy bodied oil, especially prepared to withstand the weather.

Sold everywhere in cans—all sizes.

Made by STANDARD OIL CO.

### Large Stock of Tanks on Hand.

Oil Tanks. Water Tanks. Wine Tanks. Lumber direct from the woods. THIS MEANS LOW PRICES.



5000 ft. of Pipe, good as new, at a bargain.  
**R. F. WILSON, Stockton, Cal.**

Office and Works, W. Main and Lincoln Streets.

### Prune Dip.

"Greenbank" Pure 100% Caustic Potash and 98% Powd. Caustic Soda.  
**T. W. JACKSON & CO.,**  
Sole Agents, - No. 123 California Street, SAN FRANCISCO, CAL.

## KROGH CENTRIFUGAL PUMPS

FOR IRRIGATION AND RECLAMATION.

Capacity up to 100,000 gallons per minute

They are made Horizontal and Vertical and Direct Connected to Steam or Electric Power.

IN USE ALL OVER THE PACIFIC STATES.

**KROGH MFG. CO.,**

BRANCH, 134-136 MAIN ST.

9-17 STEVENSON ST.,.....SAN FRANCISCO, CAL.

# BLACK LEG VACCINE.

**Do Not Delay Vaccinating--Your herd IS LIABLE to attack NOW and if you delay vaccinating until after Black Leg has broken out you are almost sure of a 5% loss, and as even a 1% loss will cost more than vaccinating, it pays to vaccinate before trouble begins.**

**Our Vaccines** are tested on control animals before placing on the market and they are subject to exchange for fresh vaccine if not used within six months from date of manufacture. **They have been successfully used for three years in the worst infected districts of California.**

**Our prices are lower than others',** and the growth of our business in the last three and a half years attests that our products and liberal methods are meeting with the approval of stockmen.

**Our friends are among those who have hitherto used foreign and other vaccines.**

**Testimonials.**—To prospective customers, who desire references, we shall be pleased to furnish them. **WE CAN ALSO REFER TO STOCKMEN WHO HAVE REVACCINATED WITH OUR VACCINE AFTER UNSATISFACTORY TRIAL OF FOREIGN AND OTHER VACCINES.**

### PRICES OF BLACK LEG VACCINE:

SINGLE, per package, containing ten or more doses, according to age of animals.....	\$1 25
DOUBLE, per double package, containing ten to twenty doses, according to age of animals.....	1 75
STRINGS, per package of 10 doses, including needle.....	1 25
Per package of 15 doses, including needle.....	1 75
Per package of 25 doses, including needle.....	2 50
Per package of 50 doses, including needle.....	4 75
VACCINATING OUTFIT, complete for using single and double vaccine.....	4 00
BLACK LEG SYRINGE, with two needles and extra washers, all in metal case	3 00

TERMS.—Cash with orders or we will send by express, C. O. D. We prepay all charges. Special discount to users of 500 or more doses.

Besides Black Leg Vaccine we manufacture in our Bacteriological Department **Anthrax Vaccine, Tuberculin, Mallein, Anti-tetanic Serum (veterinary), Anti-streptococcic Serum (veterinary) and Hog Cholera Serum.** (See article on Hog Cholera Serum below.)

In our Veterinary Department we manufacture a complete line of **Veterinary Remedies**, and we also carry a full assortment of **Veterinary Instruments**, including **Dehorner's, Castrating Instruments, Milk Tubes, Teat Slitters, Trocars, etc.**

WRITE US FOR BOOKLET ON BLACK LEG AND ANTHRAX.

They are readable and interesting even if you apprehend no trouble from these diseases.

## HOG RAISERS

will find interesting the article below on the subject of

## THE SERUM TREATMENT OF HOG CHOLERA.

The losses from hog cholera in the United States are very heavy, and much experimental work has been done with a view of finding some satisfactory preventive and curative treatment. This research has demonstrated the fact that the blood serum of properly immunized horses contains considerable preventive and curative antitoxins, and the proper administration of this serum to hogs suffering from hog cholera resulted in a saving of an average of 60 to 80 per cent.

Hog Cholera Serum is the blood serum of horses which have been treated with gradually increased doses of a mixed and virulent culture of the germs of hog cholera and swine plague. After a few months' treatment the animals are able to take a large quantity of the virulent cultures without any marked abnormal symptoms, and the blood contains considerable antitoxic properties.

IMMUNITY, as produced by the serum, seems to be for a limited time only. We advise that it be administered just before the season in which Hog Cholera usually occurs and once or twice again during the dangerous season.

If proper precautions as to cleanliness in administering serum are observed, and if the animals have reasonably clean quarters and good range, with occasional disinfection of styes, the herds so inoculated will go through the season practically unscathed, while neighboring unprotected herds will be suffering 80 and 90 per cent losses.

**RATIVE PROPERTIES.**—If the stock owner has been unwise enough to delay treatment until after the disease has broken out among his hogs, there is still a chance to cut short his losses by prompt recourse to the use of the serum. We have many encouraging reports from stock owners who have saved what seemed to be desperate cases by the prompt and continued use of the serum. Nearly all report that best results were obtained by giving two or three doses.

DOSE is from 8 to 10 cubic centigrammes (2 to 2½ teaspoonfuls) injected under the skin.

For references to successful users and for further particulars concerning this and our other products, Address

**THE CUTTER ANALYTIC LABORATORY, FRESNO, CALIFORNIA.**

**Write Us** when you have trouble of any kind with your horses, cattle, sheep, hogs or poultry. We are constantly experimenting to find means to combat the diseases of all domestic stock and we shall be glad to give you the benefit of our researches.

Our equipment for this line of work is unsurpassed.



**CUTTER ANALYTIC LABORATORY.**

The Cutter Analytic Laboratory at Fresno has been in existence less than four years, yet in that time, with little advertising but through the commendation from neighbor to neighbor, the sale of its products has more than quadrupled each year.

In apparatus equipment it surpasses anything on the coast, and there is said to be no better anywhere. Animals used in the production of serum range over hundreds of acres of alfalfa and are in the pink of condition all the time. Only veterinary serums and vaccines are produced in the bacteriological department. The bacteriologists in charge are constantly experimenting to find means (either biological or medicinal) to prevent and cure disease. In consequence prescriptions which have in constant use proved themselves exceptionally efficient are now being marketed under appropriate names.

It is claimed that in the matter of exchange of fresh for old vaccine (anthrax or black leg) this laboratory occupies a unique position among others, since none of the latter provide for exchange. That this provision is necessary to protect stockmen from the possibility of using uncertain vaccine there can be no doubt. Age certainly weakens any vaccine. Small-pox vaccine is good but a few weeks at most, and while anthrax and black leg vaccine retain their strength for months, and even years, they, too, gradually fall away from proper standard through age and changes of temperature.

Special features of this laboratory are the free microscopical and bacteriological examinations of specimens from animals dying from unknown diseases; also free experimentation and research, when necessary, to ascertain causes of diseases of domestic animals, and from experience and researches to recommend proper prophylactic and curative measures to enquirers who write for information concerning diseases in their own or neighbors' stock.

**ORCHARDISTS INTEND MARKETING THEIR OWN FRUIT.**—Watsonville Pajaronian: Next year we expect to see several orchardists handle their apple crops. A prominent orchardist of this township has told us that he is going to do so, and that he will not sell his apples until after he has picked and packed them. The orchardist has a heavy investment in his land and trees, and the stability of the profits of that investment rests upon the reputation of his fruit. The man who carefully cares for his orchard, and as carefully prepares the fruit for market, will gain a reputation for his pack which will insure profits in seasons of enormous crops. There will be a number of Pajaro valley apple growers who will market their fruit next year. The careful grading practiced by purchasers "by weight" has shown to orchardists that they might as well finish the job by marketing their apples and getting the full profit thereon.

**LIMA AND BLACK EYE BEAN CROPS.**—Nordhoff Ojai: The crop of Lima beans in Ventura county this year will be 500,000 sacks. There will be 40,000 sacks of Blackeye beans. These beans average eighty pounds to the sack and many growers have contracted their crops for 4 cents a pound.

**Phylloxera-Resisting  
Grape Cuttings and Plants—  
RIPARIA**  
Address **BUSH & SONS,**  
BUSHBERG, MO.

**Seeds, Plants, Etc.****MAXWELL'S NURSERIES**

NAPA, CALIFORNIA.

**Fruit, Shade and Ornamental  
TREES.**

—A GOOD STOCK OF—  
**PETITE, IMPERIAL AND SUGAR PRUNES,**  
Peaches, Apricots, Cherries, Pears, etc.  
A FEW THOUSAND ROOTED RUPESTRIS  
ST. GEORGE.  
J. MAXWELL, Proprietor.

**NEW BLIGHT PROOF APPLES  
RAISED IN NEW ZEALAND.**

A COMPLETE SET WHICH COVERS THE SEASON.

Summer.	Autumn.	Winter.
Marjorie Hay	Hay's Midseason	General Carrington
Ollmax	Mona Hay	Cliffe Seedling
Sharp's Early	John Sharp	Sharp's Late Red
	Lord Wolseley	Sharp's Nonsuch
	Willie Sharp	Taupake
		Carlton

These varieties are all good: equal to Ribston Pippin, Gravenstein, Ben Davis, or any other well-known kinds. They are not "seedlings," but grafted trees on Northern Spy stocks, and perfectly blight proof. Prompt orders necessary.  
Price \$1.00 per tree. The set for \$10.00. Scions 50 cents a foot, f. o. b. San Francisco.

Distributing Agents: Address Dept. B.  
**J. W. WREN & CO., Ltd.**  
515-517-519 Mission St., SAN FRANCISCO, CAL.

**100,000  
CHOICE  
CITRUS TREES**  
FOR SEASON 1902.

Every horticulturist should have my 28-page illustrated catalogue, which tells all about citrus trees; the old sorts and the tested new sorts, also table for planting trees, sowing seed, etc. Your address on a postal will bring one. Address

R. M. TEAGUE, Prop.  
**SAN DIMAS NURSERIES,**  
San Dimas, California.

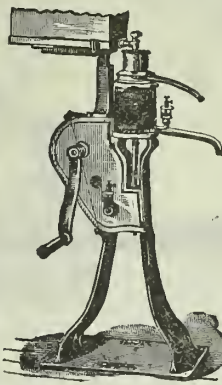
**SEED WHEAT.**

**GRAND PRIX GOLD MEDAL  
PARIS EXPOSITION 1900.**

Grown on J. West Martin Ranch,  
Livermore, Cal.

IT is clean and of uniform grain.  
Has *increased* in gluten every  
planting in California. All small,  
light and immature end grains  
removed. Has been milled by  
Del Monte Milling Co., to whom  
we respectfully refer.

FOR SALE BY  
**FRANK DALTON CO.,**  
123 CALIFORNIA ST., SAN FRANCISCO  
—or—  
T. D. CARNEAL, Livermore, Ca'.

**GOLD MEDAL**

THE HIGHEST AWARD

AT THE

**PAN-AMERICAN  
EXPOSITION**

BUFFALO, N. Y., 1901

WON BY THE

**Improved  
U. S. Cream Separator**

WRITE FOR DESCRIPTIVE CIRCULARS

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

**DIRECTIONS FOR  
SUCCESSFUL OLIVE PICKLING**

**PLACE** olives in solution composed, 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove tartness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 6 oz. salt to 1 gallon water for 7 days. Put in brine 10 oz. salt to 1 gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to 1 gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles soaked in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

**YOU MUST USE  
RED-SEAL-LYE**

**SANTANA & PERRY,  
WOOL COMMISSION MERCHANTS.**

WOOL, HIDES AND PELTS. Advances Made on Consignments.

Agents for SCABCURA SHEEP DIP—THE PURE NICOTINE OF TOBACCO. Directions on every package. A sure cure for scab and ticks on sheep, also sure destroyer of parasites on fruit trees. Invaluable in the nursery.

'Phone Black 5694.

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DEWEY, STRONG &amp; CO., Patent Solicitors, 330 Market St. San Francisco, Cal.

**GASOLINE ENGINES**

THEY ARE USED TO OPERATE  
PUMPS, CHURNS, FRUIT GRADERS,  
WOOD SAWS,  
SEED CLEANERS, BONE GRINDERS,  
AND OTHER DUTIES.

FOR FULL PARTICULARS, ADDRESS

**FAIRBANKS, MORSE & CO.,**

310 Market St., SAN FRANCISCO. 136-138 Los Angeles St., LOS ANGELES. First and Stark Sts., PORTLAND.





# DEERE DISC PLOWS

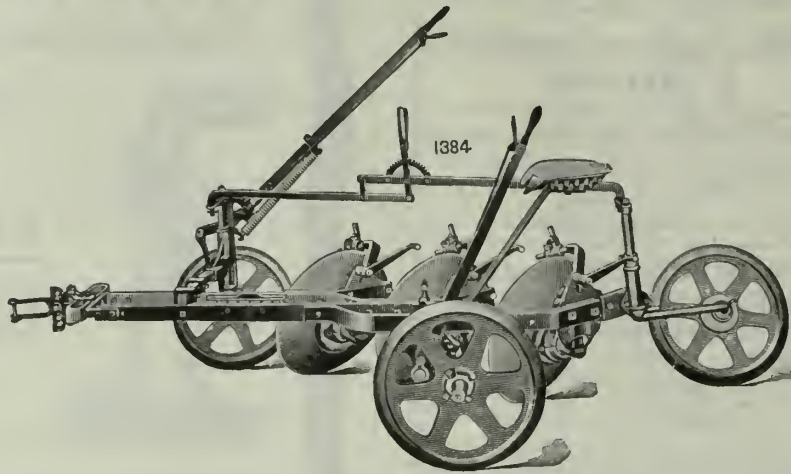
## BEAT THE WORLD

— FOR —

Ease of Operation

— AND —

Quality of Work.



DEERE DISC PLOW--TRIPLE.

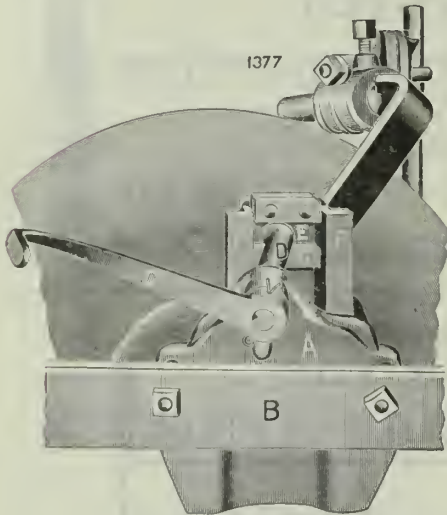
MADE AS A

Single Disc.

Double Disc.

Triple Disc.

Quadruple Disc.



THIS CUT shows the patented raising device used on all DEERE DISC PLOWS and no others. Discs can be raised six inches from the ground.

## ALL DEERE DISC PLOWS

HAVE A PATENTED STEERING DEVICE BY MEANS OF WHICH THE LANDING OF THE PLOW IS UNDER COMPLETE CONTROL OF THE OPERATOR AT ALL TIMES.

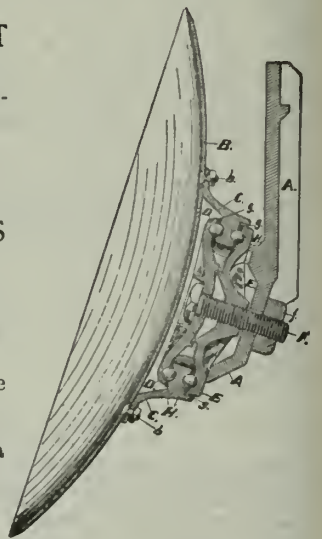
## BUY A DEERE

AND DO YOUR WORK

Quickly, & Successfully and Economically.

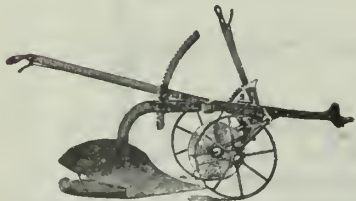
THIS CUT shows the patented ball-bearing disc used on all DEERE DISC PLOWS and no others.

NOTE THIS DIFFERENCE: Bearings on our plows are nine inches apart; other makes have a single bolt through the center.



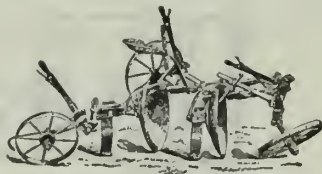
DEERE IMPLEMENT CO., San Francisco.

Hooker & Co.  
16 & 18 DRUMM ST.  
SAN FRANCISCO.



CANTON SINGLE FURROW WHEEL PLOW.

Hooker & Co.  
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CANTON DOUBLE DISC PLOW.

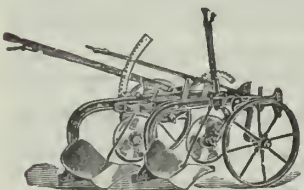


KENTUCKY DISC DRILLS.  
8-10-12 Foot.

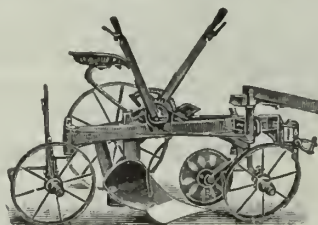
Hooker & Co.  
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SAN FRANCISCO.



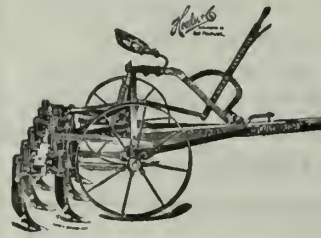
PACIFIC REVERSIBLE DISC HARROWS.  
4-5-6 Foot.



CANTON CLIPPER GANG,  
TWO FURROW.



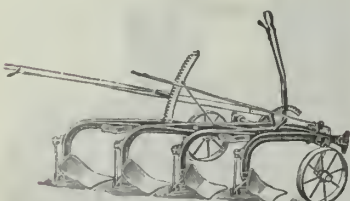
CANTON CLIPPER TRICYCLE  
SULKY.



CANTON NEW MODEL ORCHARD  
CULTIVATOR.



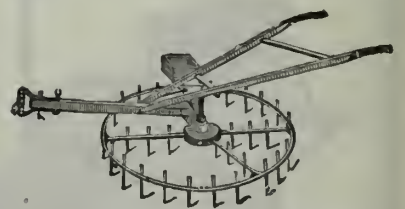
PACIFIC REVERSIBLE DISC HARROW



CANTON FOUR FURROW GANG.



CANTON "U" BAR LEVER HARROWS.  
3/4 in. Square Teeth. Others have 1/2 in.



CALIFORNIA CIRCULAR HARROW.

Write for Catalogue  
and Description.

**HOOKE & CO.,**  
16 & 18 DRUMM ST. SAN FRANCISCO.  
FARM IMPLEMENTS AND VEHICLES.

Our Prices are  
Interesting.



# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 18.

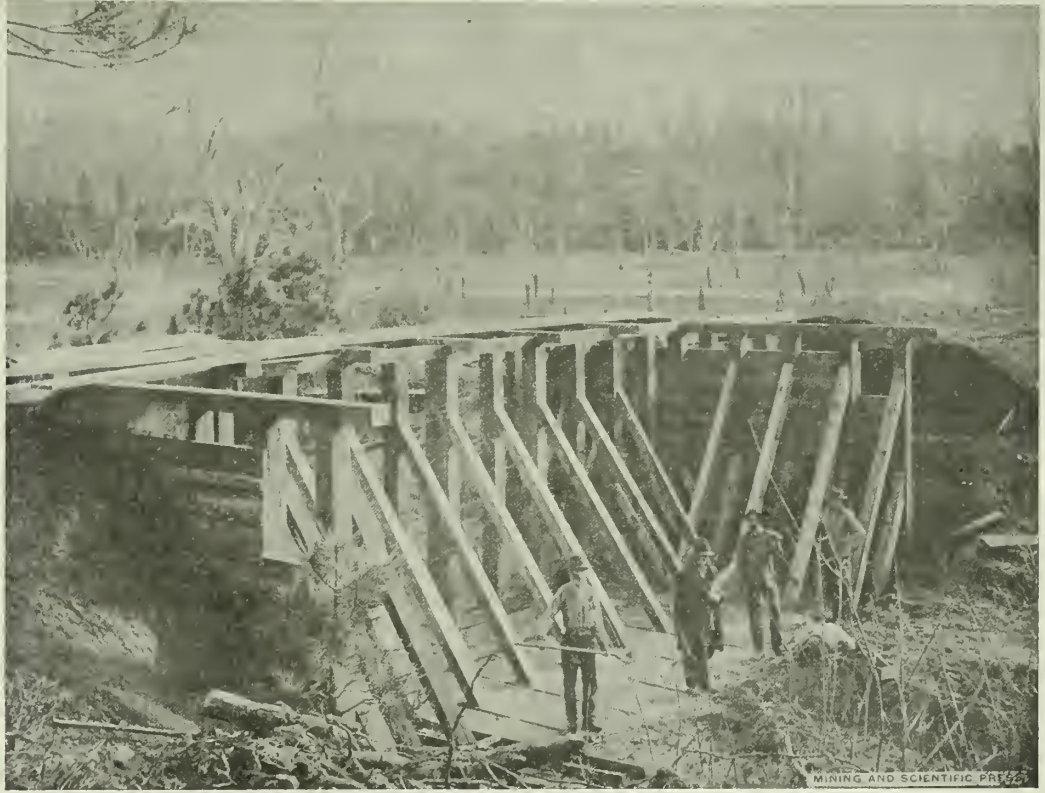
SAN FRANCISCO, SATURDAY, NOVEMBER 2, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

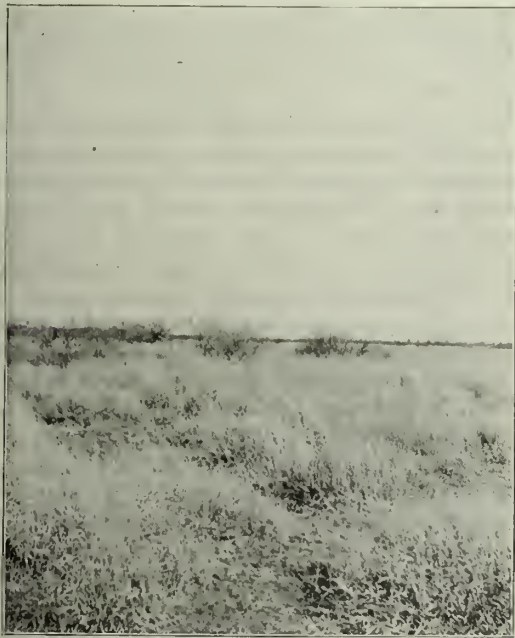
### Spillway for Earth Dams.

The requirements of irrigation and the climatic conditions in California have developed details of construction of water storage that have cheapness, combined with efficiency, to recommend their novelty. The illustration on this page is of the spillway construction in an earth dam at Railroad Flat, Calaveras county, Cal. Reservoir sites of much storage capacity are uncommon in the foothills of the Sierra Nevada mountains. The grades of the conveniently located valleys are considerable and the widths rule narrow. Where the width is considerable and the grade moderately flat, the only possible dam construction has a length equal to the greatest width of the possible reservoir. The height of dam economically possible rarely runs over 30 feet, and earth and gravel taken from the site are the only possible materials for the dam structure.

The catchment area behind these dams where it provides, as is usual, a water run-off far in excess of the storage capacity of the reservoir made by the dam, necessitates special provision being made to protect the dam from breach. The ordinary construction of waterway or spillway for surplus water is as shown in the illustration. It is built into the dam on one side, as far as practicable from the service outlet, and with its floor either on or in the natural surface. The latter is preferable, so that the approach from the reservoir site is in a cut and



Spillway in Earth Dam, Railroad Flat, Calaveras County, Cal.



Rich Natural Pasture of Saccaton and Galleta.

the discharge in a cut. The structure is given considerable depth—12 feet in the one illustrated, and sometimes as much as 20 feet, below the top of the dam. The object of this is to keep the water level in the reservoir, during flood or overflow stages of the water supply from the catchment, below any possible danger stage to the dam. The full reservoir level being, say, 3 feet below the top of the dam, the spillway bottom is 9 feet or more lower. When it is desired to have the reservoir full, and there is no surplus to lose, timber gates, for which the large vertical timbers shown in the illustration are the guides, are closed down and the water permitted to fill the reservoir. This form of construction is found satisfactory as a protection to earth dams having an extreme height of 60 feet. The full depth of the spillway is kept open throughout winter and spring, until the flood season is passed, and then closed down in time to get the full storage before the season run-off ceases to flow.

### Destructive Range Policy.

The three smaller engravings on this page, which we take from the last bulletin of the Arizona Experiment Station, are eloquent of a way in which wrong range practice is injuring the country and those who follow it as well. Director R. H. Forbes writes in detail and very impressively of the fine pasturage of the Arizona ranges in early days, when the vast



Wash in Valley Plain by Unrestrained Flood Water.

valley plains were covered with forage plants like the saccaton and galleta grass shown in the first picture. Overstocking destroyed these plants and they no longer held the soil in place when torrents came from heavy storms. The trails of the cattle seeking scant food sank in the surface, the unrestrained waters followed these trails, cutting as they flowed and collecting in larger cutting streams until there appeared through the valleys great barrancas

like that shown in the second picture. Here is a wash 12 to 20 feet deep and 50 feet wide extending 50 miles or more through what was formerly a smooth stretch of rich valley land. Through these new channels the storm waters, unrestrained by vegetation on the slopes, rush to the destruction of other lands below.

The ranges are bare when they should be rich with dry feed, and there comes the ranger's tragedy which the third picture shows. The destruction of the range at last destroys the stock which induced the destruction. The remedy for this sad state of affairs must be found, and Director Forbes looks for it in wide progressive movements for the reclamation of the ranges, the development of irrigation interests which will lead to the impounding of storm water and prolonging the life of reservoirs by lessening the amount of silt which the floods carry into them.



Result of a Hard Year on Depleted Ranges.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, November 2, 1901.

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## The Week.

There have been more good showers. The clouds seem to assemble easily and do not fly too high. Unfortunately for some, the rain is wet, and the water does not help some things which are still out in it; but, on the whole, it is valuable and delightful and is getting down deep enough to start field work widely. The fact that southern California has had this October more water than during the same month for several years ought to convince our friends down there that Providence is about to reward them for the patience and courage they have shown. There is every reason to think that November may keep the pace set by October. It is usually so. The average for November at this point for thirty years has been 2.65 inches. We have had 11.78 inches and we have also had nothing; so there is a chance for wide variation. We can get along very well with the average, though we may have to take more to bring the drier sections enough. It is a case in which the more we take the more another gets. Let it come. Everything is working well for a good year.

Wheat has see-sawed again this week and closes at about the beginning point. Spot wheat is unchanged, but easier in tone, while futures hold last week's figures. Wheat has gone in greater or less amounts in four ships—an aggregate of 7700 tons for the week. Barley has helped to fill five ships with a total shipment of about 10,000 tons—about evenly divided between New York and Europe. Spot prices for barley are unchanged, but futures are a little stiffer. Oats are unchanged, but still steadily held without activity; the largest inquiry is for red oats. Corn is between new and old and is mixed. A cargo of rye has gone to Belgium, but the low price still holds. Beans are in free receipt; steady for white varieties, weak for pinks and Bayos. Whites and Limas are going out freely—some Limas by ship to England. Mustard seed is moving to New York and Europe at old prices. Bran is unchanged; rather weak, with a chance for concessions on large lots, but buyers are shy. The visible amount is not, however, increasing at the moment. Hay is steady for the lower grade and firm for the better—holding the last advance. Beef and mutton are steady and unchanged. Hogs are also stationary, but weaker, in sympathy with the Eastern drop. Butter is weak and dragging at last week's prices. Cheese is steady and firm. Eggs are rather weak for the better and steady for the lower grades; all fresh eggs are nearer the same standard now. Poultry has a trifle better movement; but there is no strength, as Eastern is still pressing; broilers are selling as high as full-grown fowls. Shipping potatoes are firm, but unchanged. Onions are a little higher. Good grapes are selling better, but there is some fruit injured by rain. Apples are steady and fine

pears scarce and high. Oranges are quiet, new and old bringing about the same figures. Lemons are quiet and weak, owing to the cheapness of limes and cooler weather. There is not much doing in dried fruits. Prunes are being cut again. Raisins are going freely at the cut rate, but futures or large lots are not included. Almonds are still at a disadvantage, while walnuts are doing nicely with outside lots nearly up to Association's figures. A shipment of 500 cases of honey has gone to Europe. Hops drag here but are going out by rail and ship on some arrangement or other. Wool sales are about finished in the country and there may be something more in the city later on.

Although the Grain Growers' Convention in Sacramento on September 25th was not a striking success, the officers are proceeding toward organization in a very energetic manner and they are publishing very interesting propositions. One of these is that the growers of this and perhaps other States on the coast will be asked to bind themselves and their land to ship all of their grain, or to bind those to whom they sell to ship all of their grain over a certain route for a given period—say twenty years—at a certain price. It seems that certain parties will bind themselves to transport all grain to Liverpool at a figure much less than the charter rates have averaged for the past thirty years. The figure mentioned is 20 shillings, but it does not appear that that was the official rate agreed upon. The present rate is over 43 shillings, so it is apparent that in that item alone the farmers would be saving a good profit, and besides if organization is effected re-trenchments will follow along many other lines connected with the general industry of grain producing. We have no doubt that the grain can be profitably moved to Europe for half the current charter rates if the trade is properly organized and concentrated, charters taken out of gamblers' hands and delays and expenses reduced to a minimum. The question is whether enough growers can be induced to agree to anything. That question has never been answered satisfactorily yet by any producers whatever, though in some undertakings it has proceeded further toward solution than ever before. The only test of the matter is the trial, and an energetic propaganda is now in progress in the interior valley. Meetings are being held this week and will be held at the following dates and points: Marysville, November 1; Woodland, November 2; Lincoln, November 4; Elk Grove, November 5; Dixon, November 6; Brentwood, November 7; Stockton, November 8; Modesto, November 9; Merced, November 11; Madera, November 12; Fresno, November 13; Visalia, November 14. These meetings will be held at 7:30 p. m. of each day mentioned. We can warmly commend these meetings to our readers. Let all who can attend and judge for himself of the desirability of the undertakings proposed.

Mr. George C. Roeding of Fresno is pushing his Calimyrna fig in good shape. He has secured a gold medal from the Pan-American Exposition, a fact which our readers, who have been kept informed of all the capricious progress, will greet with satisfaction. We have on another page this week a very interesting letter about the capricious experiments at Niles, Alameda county, where the California Nursery Co. is getting good results. As the writer says, Mr. John Rock has been on the track of this enterprise all along, and has laid a good foundation for extension of it. It looks as though California had a great future in figs.

The orange crop in central California which is now going forward bids fair to be quite in advance of former shipments. An agent of a car company says that they expect to ship not less than 1200 to 1500 cars of oranges from Palermo and Porterville districts, while the number of cars of citrus fruit, oranges and lemons expected out of southern California will not be less than 25,000, and 3000 cars of vegetables. He believes there will be no difficulty about the supply of cars this year.

We ought to find a market for some of our surplus grains in Mexico in larger quantities than usual this year. So short are the supplies of cereals in that country that the Mexican Government has issued a decree suspending import duties and all other taxes on corn (maize) from Oct. 1 to Dec. 31.

## QUERIES AND REPLIES.

### Deep Plowing for Grain.

TO THE EDITOR:—We are getting ready for plowing. We are sowing wheat for hay. You know pretty well the nature of our country. What depth of furrow would you recommend? If deep plowing will come pretty near ensuring a crop, we want to go as far down as may be necessary. Your advice will be appreciated.—WHEAT GROWER, Salinas valley.

Deep plowing for wheat endangers the success of the first year's crop in regions where one is not sure of ample rainfall to settle the soil again quite solidly. Wheat grows best on a firm seed bed. To plow deeply—say to a depth of 10 or 12 inches—upsets the whole ground and is apt to leave openings beneath which promote the escape of moisture and break the connection between the upper stirred soil and the firm soil beneath, so that the plant may fail of its moisture supply. If deep plowing is followed by very thorough harrowing, especially with the old-fashioned straight-toothed harrow, the lumps are broken up below and the soil settles back well, and in this way deep plowing may be made safe and satisfactory. If, then, there comes ample rainfall one is apt to get a much better crop than on a shallow plowed soil. The danger lies in a scant harrowing and in possibly scant rainfall. This accounts for the fact that a second crop on deep plowing is often better than the first, because then the ground has a chance to work back in place by two seasons' rainfall. If you have been growing wheat for some time with very shallow plowing—that is, 3 or 4 inches—an improvement would consist in working 2 or 3 inches deeper, so as to catch under a hardpan which frequently forms from continual shallow cultivation. This would be desirable in any condition of rainfall, because it would allow the rainfall to enter the soil more freely and would not incur the danger of deep opening which was spoken of at first. Under ordinary conditions, then, the best recourse is not in a radical resort to very deep plowing at once, but in increasing the depth for two years and then, possibly, returning to shallow plowing, and so on.

### Macaroni Wheat.

TO THE EDITOR:—Where can I get seed of Macaroni wheat? I understand it is good for dry land. How does it compare with other wheat?—GROWER, Santa Clara.

The University will probably have some of the dark wheats for macaroni purposes for distribution in small parcels this fall, the seed for small distribution coming from Washington. These dark macaroni wheats are of a very hardy character, strong growing and fiercely bearded varieties. It is possible that they will endure more drouth than any other kind, and yet, however, it is hardly expected that they will make a good, heavy seed without a fair amount of water. As compared with other wheat in form of kernel, these wheats are long, usually pointed, slapsided, like a shoepeg, with dark colored, hard, horny substance. They are different, indeed, from the popular soft white wheats of California. We have found in our experience that these dark wheats become more starchy in our climate, and it is possible that this tendency may interfere somewhat with their macaroni value. There are many other things about the grain which must be determined by experimental growth.

### Probably Bad Spots in the Orchard.

TO THE EDITOR:—I have lost five or six trees this summer out of an orchard of 300 trees, and more are likely to die. The bark of the pear trees split open lengthwise on the trunk near the ground—big, deep cracks. The leaves are spindling and seem devoid of proper nourishment. The peach trees seem affected a little differently. The sap of the tree comes out through the bark and stands in little balls around the trunk. Then a plum tree has died without any apparent change in the bark. In some cases I can see small round holes where an insect has bored. It is the peach and the plum trees that are the worst; the apple trees are only slightly affected in some cases and the apricots scarcely at all. Is there anything I can do at once to save those trees now affected and to prevent others from catching the same disease? Will those trees now dead spring up from the root again, or would it be best to root them right out?—ORCHARDIST, Auburn.

As nearly as we can judge from your description, the trees are suffering from drouth and sunburn. It is possible that the same thing would happen when



trees are standing in soil which is saturated with water. Severe dryness or saturation of the soil produces the same result—that is, the death of the root hairs, the failure of the foliage and the injury to the bark by sunburn and borers. The minute holes of which you speak and the gumming in spots are the result of the entrance of borers, but borers do not usually attack trees unless they have been previously injured by sunburn. Seriously wrong moisture conditions are probably the foundations of your troubles and you can tell yourself whether the injury is through drouth or saturation. Examine the soil just where the trees have failed to see whether there is bedrock near the surface, so that the trees cannot find enough moist soil, or whether there is a sag in which too much water would gather. It is not probable that trees which have suffered to the extent you speak of will ever be satisfactory. It would be better to root out these trees, blast the bedrock if you find it or drain the sag if there is one, plow the soil deeply, plant new trees, cause them to branch near the ground and then give them careful attention in the matter of irrigation and cultivation.

Non-Bearing Apricots.

TO THE EDITOR:—Is it possible to so treat the soil of an apricot orchard as to cause the trees to bear fruit after failing for a number of years? If so, what chemicals are to be used and how applied?—READER, Manka.

It is hardly supposable that the soil could be so lacking in plant food as to cause apricot trees to refrain from bearing fruit and the trees still be in fair growing condition. You do not speak of any lack of growth in the trees, so we infer that they are in reasonable thrift. The lack of bearing, therefore, is in all probability due to some other cause, and not to the condition of the soil; lack of pollination of blossom, lack of moisture to enable the tree to make good fruit buds, or unfavorable weather conditions which would cause the blossoms to become of no effect, are probably involved in your proposition. If the trees are growing thriftily, it is not likely that any application of fertilizers would render them fruitful; but sometimes, even when trees are growing well, fruit bearing may be promoted by the application of phosphatic fertilizers; an application of about 1000 pounds of Thomas phosphate powder made at the beginning of the rainy season would enable you to determine whether such recourse would be effective in your case. The phosphoric acid in the phosphate powder is slowly available, consequently can be safely applied at the beginning of the rainy season. If the trees need stimulation of growth, a good application this winter of barnyard manure would be of advantage to them. If this is not available, a commercial fertilizer containing nitrogen and phosphoric acid would be the proper substitute. You can get information as to such materials by corresponding with those who are advertising fertilizers in the columns of the PACIFIC RURAL PRESS.

Scale on the Pepper Tree.

TO THE EDITOR:—Is it a fact that the pepper trees beautifying so many avenues in southern California are seriously detrimental to the citrus trees by harboring scale insects or anything else?—F. BUDGETT, Penryn.

The pepper is relished by some scales and may be regarded with eyes askance on that account, though we do not at this moment recall any wide indictment of it in that respect nor concerted movement for its removal. It is going to be pretty hard to find a shade or shelter tree free from insect attack. At present camphor trees at Riverside are inviting destruction because of the liking of the red scale for them. It is not unlikely that we shall learn how to control the insect rather than destroy the trees. The whole question is an open one.

Artichokes as Stock Feed.

TO THE EDITOR:—Will you kindly inform me as to whether artichokes are still considered good hog feed? If they are, will you give me a good address for buying them for planting for hog feed?—J. J. HOLLISTER, Gaviota.

We can only say that for some reason, which we do not fully understand, artichokes have never attained permanent popularity for the purpose mentioned. Once in a while a grower will declare himself well pleased with them; but we generally find that he abandons them after a time. Of course, they are

rather poor feed unless accompanied by some other food richer in protein; but we imagine that the plant is apt to run out and to be disappointing in that way. We cannot at this moment state who has artichokes in quantity for sale; they are usually to be had through the San Francisco seedsmen in quantities sufficient for you to make a trial. A certain quantity of these artichokes are used as a vegetable; consequently, limited supplies are always available in San Francisco markets.

Winter Vegetables in San Francisco.

TO THE EDITOR:—What kind of vegetables can be planted now in a city lot that will make growth during the winter months? San Francisco climate is apt to be a little sunless at times on account of the fog. Is Thomas phosphate good for vegetables?—CARMELITA, S. F.

It will be easier to say which vegetables cannot now be planted to advantage. The fact is that all common esculents, except a very few which are generally known to be very tender, such as beans, corn, tomatoes, egg plants, melons and squashes, and a few others, should not be undertaken now; and yet there are sheltered places on the San Francisco hill-sides or in the Mission district where there is not frost enough to injure even some of these. All the common salads and relishes, pot herbs and boiling vegetables are safe within the protecting environment of the city buildings, fences, etc. Of course, in winter you must plant to get all the sunshine you can. Thomas phosphate is good for anything that grows; but with San Francisco sand you also need nitrogen—generously applied if you use stable manure, sparingly if you use nitrate of soda or tank-age.

Field Peas as an Orchard Fertilizer.

TO THE EDITOR:—I see in the last PACIFIC RURAL PRESS an article about the use of field peas as a winter crop as a fertilizer. Please inform me what kind of field peas are used. I want to try them this winter.—D. J. PARMELE, Vacaville.

The field peas which are commonly used for orchard fertilization in southern California are the Canadian field peas, but this term does not mean anything really definite, because there are scores of varieties of field peas grown in Canada and shipped to this country. They vary considerably in form and color, bluish, brownish or white; and differ in form, some round, some more or less flattened. They all agree, however, in being hardy and growing during our winter season and they are all alike in their ability to capture atmospheric nitrogen and enrich the soil when plowed under. The ordinary field peas which you will find in the San Francisco market are of the same character and will answer just as well for an experiment to determine their winter growth and the feasibility of turning them under while there is still ample moisture in the ground in the spring.

Litmus Paper to Detect Lye.

TO THE EDITOR:—In what way is litmus paper used to detect the presence of lye in olives?—MONTGOMERY GODLEY, Lincoln.

Red litmus paper is turned to a blue color when wet with a liquid containing an alkali. In ascertaining, then, if the water in which olives are being rinsed after the lye treatment, dip the end of a strip of red litmus paper in the water. If considerable alkali is present the wet end of the paper is instantly changed to dark blue: if there is little alkali the color is lighter and the change takes place more slowly. If the color is unaffected no alkali is present.

Black Wattle Growing.

TO THE EDITOR:—I am urged by an Australian friend to purchase 500 acres or more of cheap land and plant out the acacia, or better known in Australia as the black wattle, the object being to strip the trees of their bark, which is valuable for tanning purposes. It is claimed that the tree will grow and thrive on very dry land and in five years is ready for profitable stripping. Can you tell me if it has ever been tried in this country, and, if so, with what result?—A SUBSCRIBER, Oakland.

This enterprise has been urged for the last quarter of a century and figured on by many people, but no considerable investment has been made. One result has been accomplished, and that is the wide scattering of the wattle acacias, which are desirable trees and are doing good service for shade and ornament in many parts of the State. They are hardy trees

and will grow without irrigation after making a good start, and in five years will reach a height of 30 feet or so in a favorable soil—that is, one which fairly retains the winter rains. There are many specimen trees in Oakland and Berkeley which are twenty-five years old or more and from 40 to 60 feet in height. No one has tried barking them. The cost of labor comes in at that point and makes the project so uncertain that we presume capitalists have dropped the proposition for that reason. There is no trouble about getting a good wattle forest here; whether it will pay we cannot tell. The Australians furnish some very delightful figures on that point.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending October 28, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Warm, clear weather prevailed during the first of the week, followed by light showers on Thursday and heavy rain at the close. Hay and grain are under cover, and very little fruit was left exposed to the rain. A small portion of the late crop of grapes was probably somewhat damaged. Early sown grain, fruit trees and pasturage have been greatly benefited by the rain, and the soil is in good condition for plowing and seeding. The rainfall at Sacramento during the night of the 26th amounted to 1 inch, and it was much heavier in the foothills. It is reported that the first carload of oranges from the State will be shipped from Palermo, Butte county, this week.

COAST AND BAY SECTIONS.

Unusually high temperatures prevailed during the first of the week, 86° having been recorded at Calistoga and Peachland, and 82° at San Francisco. Light rain commenced on the 23rd, followed by frequent heavy showers at the close of the week. Late grapes were slightly damaged in some vineyards, and it is reported that there will be a heavy loss on the bean crop. Grain was mostly under cover, but the rain damaged unbaled hay in San Benito county. Pasturage and fruit trees were greatly benefited, and the soil is in good condition for cultivating. Corn and potatoes are being harvested. Beet hauling is progressing. Orchardists have commenced pruning. A correspondent at Calistoga reports the shipment of several tons of winter pineapple muskmelons.

SAN JOAQUIN VALLEY.

The weather continued warm and clear during the first of the week and raisin making progressed rapidly. Light rain commenced during the night of the 23rd, continuing at intervals to the close of the week. Ample warnings had been given and raisins were not materially injured. Grain and hay were under cover. Late grapes are being picked rapidly and shipped to the wineries, and large quantities of raisins are moving to packing houses. The last crop of alfalfa had been harvested and mostly secured before the rain. Pasturage is in fine condition. Plowing and seeding continue in some sections. An immense acreage will be sown to wheat in the vicinity of Elmdale.

SOUTHERN CALIFORNIA.

The temperature at the beginning of the week was several degrees above normal; but cooler weather prevailed toward the close, accompanied by rain in all sections; at Los Angeles and Santa Paula the rainfall during the storm was nearly 2 inches. It is reported that great damage has been done to the bean crop, some estimates placing the loss at nearly half the crop. Grain in sacks and unbaled hay have also been considerably injured. Orchards and pasturage will be greatly benefited by the rain. Oranges are in excellent condition, and the yield will probably be heavy. Softshell walnuts are nearly all gathered.

LOS ANGELES SUMMARY.—Hot weather at the first of the week was followed at the close by rain, heavy except in the south. Some beans, grain and hay damaged; amount of damage depends upon the weather during the next few days.

EUREKA SUMMARY.—Rain was generally needed; crops are growing finely. Apple picking is practically completed, and about 15% of the crop is already shipped.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, October 30, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rain-fall to Date.....	Total Seasonal Rain-fall Same Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week.....	Minimum Temperature for the Week.....
Eureka.....	2.43	6.74	6.25	4.32	61	46
Red Bluff.....	1.97	3.90	3.19	1.99	80	44
Sacramento.....	1.34	1.90	1.62	1.38	82	46
San Francisco.....	.60	1.42	1.64	1.53	68	50
Fresno.....	.53	1.13	.49	.93	80	42
Independence.....	.30	1.07	.84	.58	72	40
San Luis Obispo.....	2.56	2.86	1.93	1.92	78	44
Los Angeles.....	1.88	2.00	.26	.83	78	52
San Diego.....	.28	.34	.30	.51	68	52
Yuma.....	T	.22	.02	.97	88	46



## HORTICULTURE.

### The Smyrna Fig at Niles, Cal.

TO THE EDITOR:—After many attempts and a great deal of expense the fig wasp—that wonderful little insect called the *Blastophaga grossorum*—has been established in this State.

The successful importation of the Capri figs containing the *Blastophaga grossorum* was made in the spring of 1898 for the United States Department of Agriculture by Dr. W. T. Swingle, a botanist, employed in the Division of Vegetable Physiology and Pathology.

Before the autumn of 1897 the Department of Agriculture had given no serious thought to this matter, and had done very little towards trying to import the *Blastophaga grossorum* into this country. However, upon receiving letters from horticulturists and certain statements from the San Francisco Board of Trade, about this time the Department finally thought that the time had come for them to make a decided attempt to import and establish the fig wasp in the United States.

SEEKING FOR THE INSECT.—Dr. L. O. Howard, chief entomologist, was given charge of this work by the Secretary of Agriculture, and at once wrote to Dr. Gustave Eisen of the California Academy of Sciences to secure his services in attempting the importation of the insect. Dr. Eisen was commissioned to visit the regions near the Mediterranean sea to collect Capri figs containing ripe galls with the *blastophaga* already in them. These were to be sent to the Department of Agriculture. But just about this time Dr. Howard found out that Dr. Swingle was in Naples, and so, to save additional expense, he was commissioned to attend to the work, instead of Dr. Eisen.

THE INSECT CAME.—The next summer the insects were established in Fresno after a good deal of trouble and care. The *blastophaga* was imported from Fresno to Niles during the summer of 1900, and passed the winter of 1900-1901 with scarcely any loss, and are now well established in the Capri fig orchard of the California Nursery Co. at Niles, Alameda county, Cal.

MR. ROCK'S EARLY INTEREST.—Mr. Rock, the manager of the California Nursery Co., saw into the future of the Smyrna fig industry and for years he has been importing the finest varieties of Capri fig trees from Algeria, Italy and Smyrna. The result is that he has in his orchard the finest varieties of Capri figs for raising the *Blastophaga grossorum* and for the fertilization of the Smyrna figs.

Mr. Rock was very anxious to establish the insects in the Capri fig orchard on the California Nursery, and to carry on experiments with them, but on account of other business he was unable to attend to it personally.

THE WRITER'S OBSERVATIONS.—In December, 1900, I came to Niles and took charge of the work. On my first visit to the fig orchard I found about fifty mamme or winter figs on Capri milco. The insects commenced to emerge from the mamme figs March 20, 1901, and they continued to emerge until May 9, 1901. By this time—March 20, 1901—the first of the profichi or spring crop of figs were in proper condition to receive the insects emerging from the mamme crop. I will state here that the proper size of the fig for receiving the insect is from  $\frac{1}{2}$  inch to  $\frac{3}{4}$  inch in diameter.

On July 11, 1901, the insects commenced to emerge from the profichi crop of figs and they continued to do so until September 29, 1901. When the insects began to emerge from the profichi crop on July 11 the first of the mammoni or summer crop of figs were in condition to receive them. The profichi crop was estimated as having 5000 insectiferous figs.

Now the insects will soon emerge from the mammoni crop and enter the mamme crop, in which they will remain during the winter. The profichi crop of figs is the one which contains the pollen for the fertilization of the Smyrna figs.

CAPRIFICATION.—I commenced the caprification of the Smyrna and the second crop of the San Pedro fig in July, 1901. The caprification is carried on in the following manner: The figs of the profichi crop are picked from the trees and placed carefully in shallow boxes. Then, with common drawing needles and plenty of raffia at hand, we are ready for the busy season. One end of the raffia is placed into the eye of the needle and the point of the needle is then pushed through the neck of the fig close to the stock. The raffia is then drawn through and a square knot tied around the stem of the fig to keep it from slipping off. Another fig is put on the other end of the raffia and fastened the same as the other one. These strips of raffia should be about 16 inches long. This work is kept up until we have about seventy-five strips, or 150 figs, on raffia.

These strips of raffia, with the figs, are then hung over poles about 6 feet long for the purpose of carrying them to the Smyrna trees or other fig trees to be caprificated. The number of Capri figs necessary to caprificate a Smyrna tree is, of course, according to the size of the tree—from ten Capri figs for an

average tree up to twenty-five for a very large one.

The Capri figs, already prepared, are suspended on the Smyrna branches by wrapping the raffia once around the branch to keep it from slipping off. On an average size tree six Capri figs should be suspended on the lower branches and the other four Capri figs on the top branches.

If these Capri figs are picked from the trees at the proper time the insects will commence to emerge from them soon after they are suspended on the Smyrna trees. They must pass through the male flowers in emerging from the Capri fig, and by so doing they get their body, wings, etc., covered with pollen. They then enter the Smyrna fig to deposit their eggs in the gall flowers. They wander around in the Smyrna figs, looking for the gall flowers, and in this way they completely fertilize the fig by distributing the pollen all through it. These gall flowers are the necessary flowers in the Capri fig for receiving the eggs of the female *blastophaga*, and they are never found in the Smyrna figs.

A properly fertilized Smyrna fig will show the effects of caprification in three or four days. They commence to swell and become very smooth, while the color turns to a much darker green. The non-caprificated figs soon turn a dirty brown color and drop from the tree when only  $\frac{1}{2}$  inch to  $1\frac{1}{4}$  inch in diameter.

With the 5000 Capri figs of the profichi crop in the orchard of the California Nursery Co., I was able to do very effective work. Caprification of the edible figs in this orchard and in the orchard of Mr. Shinn, near Niles, was carried on in July, 1901.

THE VARIETIES CAPRIFICATED.—The Smyrna, the San Pedro and several other varieties of edible figs were caprificated at this time. The first and second crops of the Smyrnas and the second crop of the San Pedro require caprification to mature them. The other varieties, caprificated, did not require caprification to mature them, but nevertheless they were greatly improved and benefited by the treatment they received. They grew much larger and had a better flavor than the non-caprificated ones.

The skin of the ripe caprificated Smyrna fig is a rich amber color. The fig has a medium-sized neck and a short stock. As this fig ripens the ostiolum, or eye, of the fig opens to about  $\frac{1}{2}$  of an inch. The flesh of this Smyrna has a rich amber color, tinted with pink around the seeds. To the taste it is very rich and sugary and the seeds, when cracked between the teeth, have a decided nut flavor. In size it is about  $2\frac{1}{2}$  inches in diameter and  $2\frac{1}{2}$  inches in length. This is said to be the finest fig for drying purposes. The dried Smyrna fig commands a very high price in the United States. This fig is also canned, preserved and pickled, and brings a high price in these forms.

FIG CULTURE.—A farmer who has the right kind of land and in the proper location cannot go into a more profitable business than the raising and handling of Smyrna figs. There is not as much expense in the raising, curing and packing of the Smyrna fig, in proportion to the amount received for them, as there is in the raising and handling of other fruits.

For drying purposes the figs should never be picked from the trees. As soon as they are in the proper state they will drop from the trees. They are then picked up from the ground under the trees every other day, put into lug boxes and conveyed to the drying yard. After this they are dipped into boiling brine and spread on trays to dry. In good weather, with plenty of sunshine, they will dry in from three to five days. When sufficiently dry they are put into large sweat boxes, to remain for a couple of weeks, and they are then ready to be packed for the market.

The proper distance for planting the Smyrna trees in orchard form is about 25 feet apart every way. For a large orchard of this kind one should plant two Capri fig trees for every 100 Smyrna trees. These Capri trees should be planted in a group as near the center of the orchard as possible. By having them in the center of the orchard a great deal of labor is saved during the caprification of the Smyrna trees. It is also advisable to plant five or six Capri fig trees in some place well protected from cold winds. Near the barn or the house would be an advisable place.

Mr. Rock deserves a great deal of credit for his foresight in importing so many different varieties of Capri figs and establishing them on the California Nursery ground. There are at present fifteen varieties of Capri figs in this orchard, as follows: Solms Laubach Nos. 1, 2, 3 and 4; Paul Mayer Nos. 1 and 2; Italian No. 1; Algiers Nos. 1, 2 and 3; J. C. Shinn or Bulletin; Roeding Nos. 1, 2 and 3; Milco.

With all these varieties of Capri trees, and with the climate of Niles, I can say to California fig growers that the *Blastophaga grossorum* is permanently established at the Niles station.

THE BEST CAPRI VARIETIES.—Capri Milco is the best Capri tree I know of for raising the *Blastophaga grossorum*. It bears heavily and the insects take to this variety better than to any other. This variety—Capri Milco—has three distinct crops: the profichi or spring crop, the mammoni or summer crop, and the mamme or winter crop.

Capri J. C. Shinn, or Capri Bulletin, is a very fine Capri fig for fertilizing the Smyrna figs, but it can

not be depended on for raising the insects, as it bears only one crop, the profichi. It bears an enormous amount of pollen and is, therefore, very valuable for caprificating the Smyrna and other varieties.

All the other varieties of Capri trees above mentioned are good and can be depended upon.

ON THE SHINN PLACE.—J. C. Shinn of Niles has eleven large Capri fig trees growing in his orchard of the Capri Shinn or Bulletin variety. He also has the Smyrna, San Pedro, Black Ischia and the White Endich, all of which were caprificated this season. The caprificated Black Ischia and the White Endich are far ahead of the non-caprificated ones in quality and size.

The caprificated Smyrnas and the second crop of the San Pedro on his place are good quality and size.

In my next article I will give the readers of the PACIFIC RURAL PRESS the benefit of my experiments with the *Blastophaga grossorum* for the season of 1900-1901.

JOHN C. JONES.

Niles, Alameda county.

### Early Planting, Dormant Buds and Frost Fighting.

TO THE EDITOR:—I have some questions which I wish you would please answer for me.—CONSTANT READER, Live Oak.

I intend putting out an orchard next planting time and have been debating whether it would not be better to plant very early, say, as soon after the leaves have fallen off the young trees and the land can be put in suitable condition. By so doing the rains will have a chance to settle around the roots. What do you think of the plan? Would it be better than planting, as they generally do, in the spring?

Early planting is desirable in well drained soils, and if the ground is suitably moist to a good depth it will be better to plant early than to wait until spring, especially if you have a rather light loam to deal with.

A nurseryman told me that dormant buds, when 3-year-old trees, made a better showing than June buds of same age. How about it?

Yes, we think they might, if the dormant buds make a good start and are given the extra attention which dormant buds require.

In planting dormant buds, how would it do to plant the bud a few inches below surface of ground, scoop out around tree, and, when bud is a foot or more high, fill in?

It will do all right in a light, sandy loam, where no water will stand in the hole, and you cut back the stub properly before filling in. Do not think of doing it in a heavy soil.

During the last year do you know of any improved system devised for fighting frost? Is the use of coal baskets effective? How far apart are they generally put? Where can the coal basket be procured?

The coal baskets are the most approved means of fighting away frosts, as has already been fully described in earlier issues. About forty baskets to the acre are used. Make the baskets of wire screen, like ox muzzles, large enough to hold about ten pounds of coal and kindling enough to light it.

The Department of Agriculture announces that it has finally "succeeded in securing the Jordan almond, exportation of which has been rigorously prohibited by Spain for some years, and will now experiment with it to determine the best localities for growing it. This species of almond is regarded as the finest in the world." We do not quite see how exportation could have been so rigorously prohibited. The variety has been in California for some time.

## THE FIELD.

### Alkali and Its Treatment.

By O. B. BYRAM, Westminster, at the Santa Ana Institute.

The vexed question, "How may alkali lands be made more productive and profitable?" is a large one, and of great importance to the farmers of semi-arid America. The agriculturist of southern California is not the only farmer who is financially interested in its solution, but the farmer in the arid regions of other lands has the same problem to solve. In all these lands, where water lies near the surface, and irrigation is practiced, alkali is found. This subject is of vital interest to the farmer in this part of our State, because in some sections there is hardly a farm of forty acres which does not have one or more streaks of alkali running through it.

In the aggregate there are thousands of acres of this land, now utilized as pastures and stock ranges, which may be transformed into beautiful orchards and verdant fields of alfalfa, celery, corn and other



profitable crops when freed from this injurious compound. The value of these lands would be quadrupled and the total increase would mean many millions of dollars added to the wealth of our State.

I shall not undertake to answer this momentous question in this brief paper, but will touch only on a few points, and make a few suggestions which will help to answer it. I write from personal experience and observation covering a residence of twenty-five years. I will first treat my subject from a historical standpoint and afterwards speak of remedies and make a few suggestions.

**RISE OF THE ALKALI.**—When the first settlers planted the colony of Westminster, thirty years ago, alkali was little known, and its presence in the dark, rich soil of the plain little suspected. Nearly all chose the dark, rich lowlands originally covered with a heavy growth of mustard or sunflowers, on which to build their future homes. The man who chose the cactus-covered sand ridges which drifted with every high wind was pitied or laughed at, and his acres by many were considered worthless. Artesian water was soon discovered and freely used for irrigation. After a brief period of this treatment those rich lands began to show considerable alkali. Now, why was this? In the virgin soil the level of the surface water was much lower and the alkali left by evaporation was just above it, but out of the reach of crops.

Irrigation, as then practiced, raised this level and brought up the alkali with it, leaving it at or near the surface within reach of crops. All, or nearly all, irrigation was excessive, because the water, flowing in abundance from the wells, was carried over the fields in ditches. In this way the loose, porous soil was soon filled with water to the surface. Early in the season barley was usually sown, the crop removed and the stubble irrigated and planted to corn or potatoes. The corn was irrigated at earing time, making two irrigations for the land when evaporation was greatest.

After two or three years of such treatment most of the land refused to grow anything but weeds. What was then done? The larger number of the colonists abandoned their farms or sold them and moved away. Of those left still living only a few remain and they, with the newcomers, are trying to solve the alkali question, I am glad to say, with some degree of success. The abandoned farms remained for years unfenced and unproductive, the orange and other fruit orchards and vineyards died. It was then discovered that the despised ridges were comparatively free from alkali and therefore were the most valuable.

Some of those who remained became discouraged and were at their wits' end. On their night vigils they imagined that the crowing cock said, "Alkali here!" "Alkali here!" which was answered by those of other barnyards far and near with the same cry, until the early morning air rang with "Alkali here! Alkali here!" Yes, alkali was there almost before the farmer knew it; but he knew it when his barley died young or was very weedy, when his corn grew very short or dried up before earing, when his potatoes were few and all very small, and when his orchard trees died and had to be cut into stovewood, and his once productive farm became covered with a heavy crop of weeds which nothing would eat.

**EXPERIMENTS.**—Then followed a period of experimenting. One man thought to subdue the alkali by plowing his land several times during the summer season, but failed. Another plowed his farm into narrow lands with dead furrows running in the direction the land sloped; this also with little success. A third won partial success by plowing his land very deep into lands about two rods wide, with back furrows high and dead furrows deep. He then ran water down each back furrow until the dead furrows were full of dark-colored water, then quickly rinsed them clean with pure water into a swale at the lower end. Repeating this a few times, his land raised a heavy crop of barley and afterwards corn and alfalfa where it was formerly too strong in alkali. A few sowed gypsum on their lands, but in too limited quantities, and, of course, failed. Quite a number of late years have greatly improved their pastures by flooding them several years in succession. This, however, is a questionable practice and should be discouraged unless there is a good outlet, because the lands on either side and just below, and which may be of better quality, are almost invariably injured and often ruined.

**WASHING IT OUT.**—Flooding, where practicable, however, and supplemented with tile drains properly laid and with a good outlet, is an ideal method of reclaiming alkali land. At least five farmers near Westminster have laid underdrains of tile with very satisfactory results. The first essential to success in tile drainage is a good deep outlet or drainage ditch into which to run the tile drains. In my opinion, these drainage ditches should be dug in the lowest swales and should follow the natural beds of swales, sloughs or creeks to the ocean, instead of section and half-section lines. They would cost less to dig, have the greatest fall possible and would do the most good. The law provides for the formation of drainage districts for the purpose of constructing these ditches. Two ditches already dug are of great benefit to all who use them; but, owing to litigation, the drainage district plan is unsatisfactory to many and is only a

partial success. For this reason perhaps the better plan would be to have them dug by the county. Let a comprehensive plan be adopted, each ditch located and surveyed by the county surveyor and the work let to the lowest bidder. Between Coyote creek and Bolsa are four creeks or sloughs, all of which could be used as guiding lines for future drainage ditches. These ditches, honestly and economically constructed, would be a great public improvement. They would not only be the means of greatly increasing the amount of farm produce, but would directly or indirectly benefit every citizen of the county. Then why not construct them at public expense, the same as highways, bridges, courthouses, etc.? The laying of tile drains alone is a great expense for the farmer; let the county construct the outlets. At present we do not have these ditches, and years may pass before we do. In the meantime what may be done?

Allow me to throw out a few suggestions. Let our supervisors carefully grade all public roads now laid out through these alkali lands, with a ditch sufficiently deep on either side to carry off all extra water during the wet season. Then let each farmer see that no pond of alkali water is allowed to form on his farm, but drain them into these road ditches.

**ALFALFA WEEDS.**—Another remedy lies within the reach of all. We burn weeds and salt grass on the grounds where they grew. This is a mistake that I learned more than twenty years ago. While burning weeds in large piles, I noticed what appeared to be drops of liquid fire falling from a burning mass to the ground under it. By the aid of a long stick I found it was melted alkali salts. I have seen the common salt bush or tumble weed, growing on cultivated land, 4 feet high, in such a dense growth that a horse could hardly go through them. This crop would weigh from three to five tons of dry weeds to the acre. Dr. Hilgard writes me that "these weeds contain from 15% to 20% of alkali salts. Consequently, their removal from the land by burning should by all means be done with a view to the diminishing of the alkali content of the soil below the danger point. The amount thus removed in the course of a half dozen years will in many cases be sufficient to enable you to grow ordinary crops." Dr. Hilgard evidently referred to land rather strong in alkali. I have no doubt that a much less time would suffice on the most of our alkali lands. I repeat: Never burn weeds or salt grass on alkali lands. Remove the weeds to the roadside ditch to be burned, or spread them on the road. Tons of alkali salts may thus be removed from the land.

**SUCCESSFUL TREATMENT.**—Black alkali spots have been reclaimed thus: Throw up a levee around them, fill with irrigating water, let it stand until it becomes like strong coffee in color, then drain off rapidly. Repeat until water is clear. Cover with as much fine straw as can be plowed under to supply humus.

The experience of the past dry years has taught us that it is unwise to irrigate alkali lands during the hot months of summer, when evaporation is greatest. Better grow such crops as piemelons and alfalfa, which require little or no irrigation. Do as little irrigating as possible in summer, and, when you do, use galvanized iron irrigating pipe. Move it from place to place, so as to wet the surface without filling the soil with water.

It is advisable to irrigate in winter, because evaporation is then at a minimum. One man suggests utilizing the Santa Ana river for this purpose in winter.

Silas Wright of Bolsa has successfully used sulphuric acid to neutralize alkali. He says that half a ton per acre is sufficient and that it can be had 50% pure at \$13 a ton. Dilute with water and apply it with a road sprinkler.

With the hearty co-operation of the owners of alkali lands along all the lines suggested in this paper, may we not hope that the time is not far distant when these unsightly places in our landscape shall be made to produce abundant crops of all kinds?

## THE POULTRY YARD.

### Sonoma County Methods With Fowls.

Sonoma county is the banner county for poultry products, and glances at the local methods are interesting to all other producers. We find in the Santa Rosa Farmer notes of practice at Penns Grove which are full of important details. Jens Thomsen came to Sonoma county in 1882 and has been living with his wife on the 59-acre tract below town for four years. He has four cows, 2500 fowls, mostly Leghorns, on ample range; feeds liberally, giving onions as long as he can buy them at 50 cents a sack, and always figures out a reasonable profit yearly. P. Aggensen rents seventeen acres and makes a good living with two cows and some 500 laying hens. C. Hansen feeds alfalfa, grain and soft food and sells some 140 dozen eggs a week.

G. C. Bartlett aims to carry about 1100 fowls on a well improved farm of fourteen acres, and figures out a profit of from 75 cents to \$1 to the hen. He cuts three crops of alfalfa without irrigation from a strip of eight square rods, and is satisfied that half an

acre with water would give ample and economic green feed for 1500 or 2000 fowls, with enough surplus to give three or four cows and horses what they need, with hay. He has a windmill, but will use gasoline or coal oil for pumping. A young orchard of Newtown pippins gives shade and is making a thrifty growth. He has some 400 young fowls in houses 8x12x5, with top ventilation, two shakes on either side forming the roof of one-third pitch on 2x8-inch runners, strong projecting cross bars 2x6. Two end pieces keep out rats, etc.; the earth floor is puddled and stamped to make it solid so that it can be cleaned weekly. Crude carbolic acid is used liberally and whitewash is applied once or twice a year. The roosts are loose and with supports can be removed weekly, thus preventing vermin from finding any hiding place.

L. H. Butin rents twenty-four acres. They have 1000 fowls, old and young. Vegetables and green feed give a change of diet, with the best of wheat. Nest boxes are movable and built in a single tier on runners, with one-half of the apex roof loose to give access to eggs or fowls. He has other stock, but desires to devote his time to the poultry business.

H. F. Regenstorff has a model poultry farm of nine acres. In seven years' experience his fowls have never missed paying expenses for a single month, and 600 hens figure out a handsome profit for the year. He has fastened a piece of iron onto the handle of his force pump to lighten the labor of pumping. Covered water troughs are thoroughly scrubbed out; feeding of soft food and grain is done regularly. The best is none too good. Gabled-roofed houses, 8x10, with a big door in one end and a small one opposite, holds sixty fowls; movable roosts are away from the wall and on a level; 125 cypress trees cost 1 cent apiece at 12 inches high, planted 4 feet apart, untrimmed, form a good windbreak in three years without any dead wood.

Profit on poultry ranges from 50 cents to \$1 a head, according to the man behind the hen. Fresh water, the best grain, greens and soft food, mixed with milk, if obtainable—in short, a variety—will give the best results if fowls are well sheltered and kept clean.

**MR. PURVINE'S ESTABLISHMENT AT TWO ROCK.**—A writer from the Tree and Vine recently visited the ranch of W. Purvine, Two Rock valley, Sonoma county. He says he found one of the most successfully operated practical poultry ranches in the world. The stock is largely White Leghorns and numbers 6000 of the healthiest hens that ever came up to a trough for their morning mash.

**FREE RANGE.**—Mr. Purvine is a believer in free range and the colony plan, and his flock have the use of 313 acres of rolling land. He says: "Few people seem to realize the almost absolute necessity of free range for fowls, if they are to get the best results in fertility and vigor; or, if they do realize the importance, they do not give them the freedom which is necessary to produce the best breeding stock. Thousands upon thousands of good chickens are spoiled annually by lack of room. There is little doubt that as many eggs can be obtained from hens in close confinement and fed stimulating food as can be had from fowls having larger range, but the labor and expense is largely increased. There is, however, something further than the mere number of eggs produced, if one expects to remain in the business, and this is the reproduction of the flock. It is impossible to get the same strength and vigor when the parent stock do not have suitable exercise, abundant fresh air and proper food."

**FEEDING.**—The fowls on this great egg farm, which, by the way, is only one of a large number in this section, are fed only once a day, with the addition of a lunch of green feed at night; the attendant starts with a team hitched to a fruit truck loaded with four barrels of water, five sacks of wheat and a mash composed of three sacks of coarse middlings and forty pounds of either cut green bone or ground fresh meat, which is mixed with skim milk that has been allowed to sour. It takes from 6 A. M. until 11 o'clock to complete the feeding and watering; the mash is fed in troughs and the wheat is scattered on the ground and a sufficient quantity put out to last for twenty-four hours.

**HOUSES.**—The houses are 12 feet long by 5 feet wide and 4 feet to the eaves; shake roof and gables are only slatted, so that each end of the house from the eaves up is practically open. They are built on runners, so that in cleaning it is only necessary to move them a short distance with a team. The roosts are five in number and located 18 inches from the ground; seventy-five hens are roosted in each house. On this system the houses are located in pairs and connected with a portable fence at each end, which forms a hollow square to place the feed and water in, so that cattle in the same field cannot reach the poultry food, the land being used for a dairy at the same time, which enables the owner to raise two crops on the same piece of land.

Seventy-five hens are located in each house, making 150 fowls in a colony; the colonies are from 400 to 500 feet apart; the hens, being well supplied with feed, are always content and do not wander from one colony to another. Mr. Purvine recently sold all of the stock on the place and leased the property to Theodore Thorgesen, a practical poultryman.



## THE APIARY.

## Moving Bees.

As there is a calculation that the bee keepers will largely move their bees away from the San Joaquin valley pear orchards during the next blossoming time, details about moving bees are interesting. M. H. Mendelson of Ventura county gives his experience in the Pacific Bee Journal. Plenty of honey and bees in the fall leads to plenty of brood and bees in early spring, and in this condition greater care is necessary in the preparation and moving. Mr. Dant's idea of darkness in a car is a good one. For that reason I prefer the night for moving with the best success. It is cooler, the dust does not rise, but the dew keeps it down. Dust is suffocating and also makes dirty hives and combs. An elevated rack is better for moving to avoid the dust, and if there is no dust the other conditions are in favor of night moving. Still, it is hard on a man, and I shall prepare a canvas, darkened underneath, for day moving, with good ventilation, but I shall not give up night moving for best success.

**PREPARATION.**—I prepare the colonies according to their condition. If with only three to four combs

of brood, and bees accordingly, a full width and high entrance are best. An entrance screened is sufficient, but if more brood and bees, full top ventilation is necessary. In cold winter weather brood entrance ventilation is sufficient. There should be sufficient space between the tops of brood frames and the ventilating screen above to accommodate the full cluster of bees, if necessary. This will keep the brood from being overheated and consequent destruction of the colony. I prefer full top ventilation, but a high brood entrance gives a good circulation of air.

Never put a top screen so close that bees can crowd around and smother. I once moved a lot of bees out of the Matilija canyon after a big freshet. The road through or across the stream was full of boulders. Many times did the axles of my wagon drag over these boulders and come down with a jar. Still, the resistance of the deep water kept the wagon from coming down too heavily. With careful driving, on examination I found that I did not break a comb, but my bees got a fearful shaking up. The sun came out hot and in a couple of hours the bees began to crowd around the screen, for they were moderately strong. The screen was only 1/2 inch from the top of the frame, consequently a majority of them smothered. After that I always had the screens much higher.

**WATERING.**—If moving in warm weather and you

expect to be a number of days on the road, your bees should have water. Take a shallow pan and put in a cheap sponge and fill with water. If a sponge is too expensive, take cotton batting. This will keep the water from spilling. Put it on top of the frames and fasten it to keep it from tilting about and killing bees.

Do not be too generous with water. If the brood is close to the top of the bars in old combs, even with plenty of honey, you should move with success. Cocoons in old combs strengthen them. New combs with a circle of honey at the top and plenty of brood will break off at the edge and cause loss of honey, if driving is rough and proper preparation is not made. When I moved to the bean fields I made it a point to have from twelve to fifteen pounds of honey. Although I move with hives full of honey with success, the least honey is preferable. If you use a super in the hive, alternate with combs and empty frames; but three to four combs is much better. Even the brood department alternated is better in very warm weather.

The prune combine has decided to drum up trade in sections of the East not covered by brokers. Will V. Dinsmore, who has been in the employ of the Association as bookkeeper, has been sent East to act in the capacity of prune pusher.

# BLACK LEG VACCINE.

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**Our Vaccines** are tested on control animals before placing on the market and they are subject to exchange for fresh vaccine if not used within six months from date of manufacture. **They have been successfully used for three years in the worst infected districts of California.**

**Our prices are lower than others',** and the growth of our business in the last three and a half years attests that our products and liberal methods are meeting with the approval of stockmen.

**Our friends are among those who have hitherto used foreign and other vaccines.**

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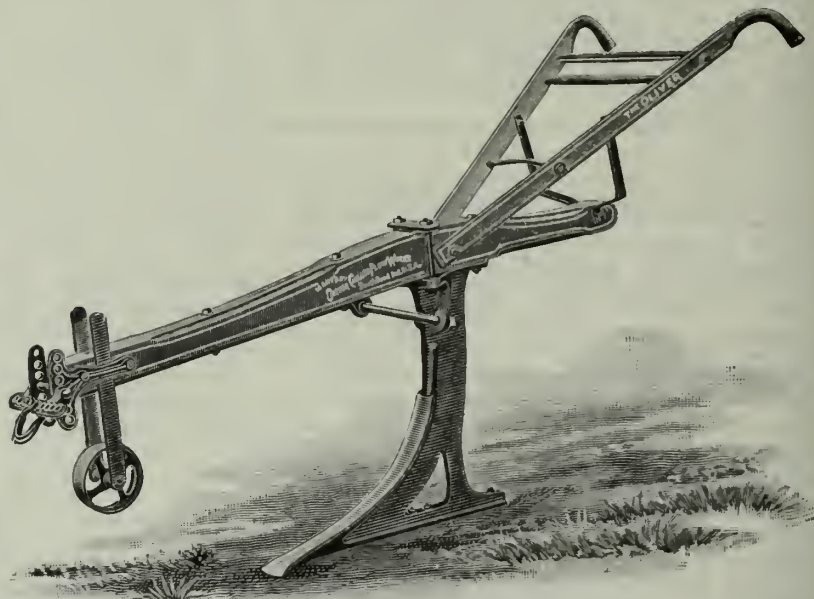
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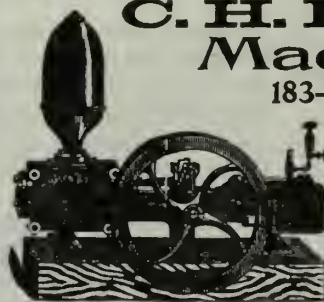
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## Agricultural Review.

### BUTTE.

**SWEET ORANGES.**—Oroville Register: P. R. Persons, vice-president of the Oroville Citrus Association, says the oranges are unusually sweet this fall. While the outside has not colored much up to now, the flesh of the orange is yellow and the juice is sweet. He thinks it has been owing to the extremely warm weather. A few nights of frost will turn the rind of the orange and the fruit will be marketed early and be in fine condition.

**THREE HUNDRED ACRE ORCHARD.**—Oroville Register: The Bonito orchard on the Onyett place, south of this town, is one of the finest orchards in Butte. It is not as large as some others, yet it covers 300 acres; 30 acres are devoted to Bartlett pears, while 270 acres are planted to peaches. The varieties are Seller's Cling, Tuscan Cling, Orange Cling, White Heath, Muir, Mary's Choice, Salway and Lovell. Most of the fruit is sold to the canneries, but some is dried. The oldest tree in the orchard is twelve years and the youngest four years. The property is owned by the Hearst estate, and A. Moncure of Palermo is the local manager. The fruit is very large and fine and the trees yield heavily. For the first time since the orchard was set out some of the trees were irrigated during the past season. A steam engine and a centrifugal pump were used to lift the water. Most of the trees bear very heavily without irrigation.

**COTTON GROWING.**—Oroville Register: Mr. M. Reyman has grown this season some excellent cotton. He gave us a sample showing that this locality can produce a first-rate quality of cotton. The stalk or plant is, perhaps, 4 feet in height, and has a number of cotton bolls showing the fleecy white product, while there are twenty or thirty of the bolls that have not yet opened. We learn that the late C. Mortenson tested cotton in the Union school district a few years ago, and some of the plants were very large and thrifty.

### KERN.

**BERMUDA GRASS A GROWING PEST.**—Bakersfield Californian: Bermuda grass is becoming a nuisance in the land and is spreading with such alarming rapidity as to cause much uneasiness in many quarters. A few years since this hardy plant was scarcely known in the country; but the seed is light and easily carried by the winds, and the irrigating ditches have proved a ready means of distribution. Whole fields have been taken by the grass and it is spreading through orchards and cultivated acres with astonishing rapidity. Once rooted, it will apparently flourish any place where there is the slightest moisture, and the method of its growth kills out all other vegetation. There is not a lawn in the city that has not been taken by it, blue grass and clover standing not the slightest chance against its vigorous growth. Its destruction is a question that is going to demand attention, and that, too, at an early date.

### MENDOCINO.

**SHEEP AND GOATS.**—TO THE EDITOR: Mr. J. C. Hobson has just returned to his home in Healdsburg, after an absence of all summer on his large stock range in Anderson valley, the most productive range belt of Mendocino county. Mr. Hobson's range was stocked with 900 head of sheep, 58 head of cattle, 60 head of hogs and 765 head of high-grade Angora goats. Last August Mr. Hobson sold 475 head of Angora nannies to Mr. Earnest Humbert, who shipped them to his home in Coney, Iowa. Goats now command very fair prices and the demand is good at from \$3.50 to \$5 per head for good graded stock. Good fat weather goats command in the mutton market a price almost equal to sheep. The flesh of the goat is of a far superior flavor and much more healthful than that of mutton, as the goat is very free from the disease and parasite of which mutton is subject. Well bred goats will shear from three to five pounds of mohair during the year. For the five years previous to 1901 mohair averaged in price 34 cents per pound. The goat is more of a browser than a grazer. The sheep industry has been on a very satisfactory basis for the past few years. This season good mutton sheep brought from \$3.50 to \$4.50 per head. About 10,000 head of mutton sheep were driven from the Anderson valley section this season. Sheep sheared a very satisfactory clip this year. The fall shearing has just closed. —HASKELL MEYER, Healdsburg.

**SUCCESSFUL WOOL SALE.**—Ukiah Republican-Press: Very fair prices were received for Mendocino county wool at the sale during the week. There are about 900 bales stored in the Crane Warehouse, nearly all of which has been disposed of.

The top price paid was 12c and the lowest figure was 11c. The growers are generally pleased with the prices received.

### MONTEREY.

**HEAVY WHEAT CROP.**—All the Southern Pacific warehouses in Monterey county, with additional sheds 1600 feet long, are filled to their utmost capacity with grain. The amount of barley and wheat under cover aggregates some 115,000 tons. The yield of grain, which is the heaviest in many years in Monterey county, aggregates over 160,000 tons.

### SAN JOAQUIN.

**BIG POTATO SHIPMENTS.**—Stockton Mail: Everything in the produce line is taking a back seat just now for King Potato. From twenty-five to thirty carloads of the tubers are being shipped out of Stockton daily to Texas, Arizona and New Mexico, and some go as far east as St. Louis, Chicago and New Orleans. At the present time they are bringing from 60 to 80 cents a sack of 115 pounds, but it is predicted that inside of sixty days the price will be from \$1.25 to \$1.50 a sack. This is the biggest potato year that this locality has ever known, and some of the heavy shippers are making little less than fortunes out of "spuds."

### SANTA CLARA.

**VINEYARDS GOING TO DECAY.**—San Jose Mercury: The destruction of the vineyards of the west side of this county is something most distressing. Hundreds and hundreds of acres of vines are practically dead. Four years ago, and three years ago—even two years ago—the prosperous vine section about Cupertino and north toward Mountain View, west to the foothills and well into the mountains south to Los Gatos, presented a scene to delight the eye and sense of the agriculturist. There were numerous wineries and all were crowded to their capacity to crush the grapes delivered to them, and the whole section gave evidence of great prosperity. Now all is changed. The wineries are generally closed and in many cases the cooperage is for sale. Vineyards of 40, 60 and even 100 acres have returned but little more, in many instances, than was formerly harvested off of two or three acres. The vines are utterly worthless and, it may be said, dead. The cause of this destruction is not yet clear. Many persons say it is the phylloxera. Others say it is due to the three dry years and the phylloxera. Careful study and investigation will no doubt find the cause and the remedy.

**BIG PRICE FOR AN ANGORA GOAT.**—San Jose Herald: The feature of the opening day of the annual convention and show of the American Angora Goat Breeders' Association, in progress at the stock yards in Kansas City, Mo., was the sale of a 3-year-old buck, owned by C. P. Bailey & Sons of this city, to Mrs. A. M. Armour of Kingston, N. M., for \$1050. This is the highest price ever paid for a goat.

### SANTA CRUZ.

**RUSHING APPLE GATHERING.**—Watsonville Pajaronian: Apples are being gathered and delivered with all possible haste. The fall has been very open and has permitted work in the orchards without interruption, but there is the fear that the rainy season will soon open, and the apples which are out then will not grade up in quality for shipment with those picked earlier. Heavy rainstorms at this time of the year injure apples in Pajaro valley.

**BEET HAULING SUSPENDED.**—Watsonville Pajaronian: Beet hauling was shut off last Friday and Saturday because the delivery from the fields was considerably in excess of the daily slicing of the big mill at Spreckels. It did not seem possible that the farmers of the Salinas, Pajaro and San Juan valleys could deliver enough beets to gain on the daily slicing of the 3000-ton mill at Spreckels, but they have done so, and the beet growers of this valley believe that they could now deliver enough beets to keep the big mill running for quite a time if the railroad would supply the cars for the transportation of the beets. It does not take long to unload beets where nets are used, and that saving of time shows a gain in the tonnage delivered daily as compared with three or four years ago.

### SISKIYOU.

**MANY HOGS DYING.**—Yreka Journal: A number of farmers at Little Shasta, Big Shasta and Willow Creek are losing hogs from some disease, supposed to be hog cholera. The hogs refuse to eat, and want to drink as if dry, but drink very little. All sorts of remedies have been tried, without much benefit. One farmer says the most success he gained was in burning sulphur, which almost suffocated them, but resulted in the death of only two head in eight days. Bleeding has been tried, but no blood could be drawn

by the most severe cutting, which indicates that the malady is a blood disease, undoubtedly contagious and is of feverish nature.

### SOLANO.

**GOOD PRICE FOR A JACK.**—Dixon Tribune: J. R. Madden sold this week a two-year-old jack to the American Beet Sugar Company at Oxnard, San Luis Obispo county, for \$500. The animal was a fine specimen of his kind.

### SUTTER.

**FIG PACKING.**—Sutter County Farmer: A large force of fig packers has been put to work at Rosenberg Bros.' packing house here, and the rush will continue for several weeks if not longer. While the early rain spoiled a portion of the crop there is about the usual amount to handle, and the pack will be large and of excellent quality.

**FIGS A HALF CROP.**—Sutter Independent: At the time we had the rains in September it was predicted by the local fig growers that there would not be half of the figs cured and packed. This prediction has come true, for it is now definitely known that more than half of the crop soured on the trees and all the local growers report less than half the amount of former years dried.

### TEHAMA.

**MULES FOR CUBA.**—Red Bluff News: A Government buyer purchased thirty-eight head of mules last week in the Pascenta country, paying, it is said, an average of \$83 per head. Farmer Myer sold twenty-three head, Burt Bros. thirteen and D. C. Mitchell two. The mules are intended for Cuba and are to be delivered in two weeks.

### TULARE.

**PROFITS OF POULTRY.**—Dinuba Advocate: A. E. McClanahan of Traver sold \$50 worth of eggs from 200 hens during the month of September. The feed cost him \$12.50, giving him a net gain of \$37.50. He has raised from an incubator 400 of the Wickoff White Leghorn strain and has lost but two chickens from the lot, one of those swallowing a small wire nail and the other being killed by a foxtail.

**EXTERMINATING WHITE SCALE.**—Visalia Delta: Horticultural Commissioner S. A. Baggs of Lindsay reports that the work of eradicating white scale has been attended with the greatest success. Last year about 500 fruit trees in Lindsay and Porterville were affected, and a recent inspection showed that 98% of these destructive pests had been exterminated. The ladybug known as Vedalia cardinalis has done the work. Mr. Baggs has been

propagating some more of these little enemies of the scale and the larvae will soon be in readiness to liberate among the few trees still infected.

**BLACK LEG PREVALENT.**—Visalia Delta: Dr. H. M. Hunter returned recently from Porterville and vicinity, where he had been inspecting cattle. He reports that he found numerous cases of black leg. He condemned one horse that was afflicted with glanders.

### VENTURA.

**SUGAR BEET ACREAGE.**—Los Angeles Herald: The acreage devoted last year to sugar beets in the territory tributary to the Oxnard factory was between 11,000 and 12,000 acres. The crop was 150,000 tons, yielding 18% of sugar and netting the farmers over \$600,000. It is expected that next year the sugar beet acreage will be from 17,000 to 18,000 acres. The outlook for the farmers of Ventura and Santa Barbara counties is excellent, so far as it is possible to judge at this time.

### YOLO.

**CREAMERY MEN KICKING.**—Sutter Independent: The owners of the Knights Landing and Verona creameries are complaining because of the noticeable decrease in the supply of milk in the last six weeks. The same complaint is made at the Tudor skimming station. It is customary to experience a small dropping off of the supply during the dry fall months, but it is claimed that the decrease this fall is greater than usual.

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GRAND PRIX GOLD MEDAL.  
PARIS EXPOSITION 1900

Grown on J. West Martin Ranch,  
Livermore, Cal.

It is clean and of uniform grain.  
Has increased in gluten every  
planting in California. All small,  
light and immature end grains  
removed. Has been milled by  
Del Monte Milling Co., to whom  
we respectfully refer.

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**Eureka Harness Oil**

The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes. Made by STANDARD OIL CO.

**CASH!**

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CONSIGNMENTS OF ALL KINDS OF PRODUCE. CORRESPONDENCE SOLICITED.

**W. C. PRICE CO., General Produce Commission Merchants,**  
413 Front Street, San Francisco, Cal.



## THE HOME CIRCLE.

### My Neighbor's Garden.

Up over the wall at the garden's end  
The ivy climbs. Bright nasturtiums bend  
Their brilliant blooms to the glossy leaves  
As in and out the sunlight weaves.

At early morn and at evening hour  
My neighbor cares for this blooming  
bower;

Little knows he that just over the way  
One shares his beauty day by day.

'Tis a homely garden, but O so fair!  
Its precious fragrance fills the air.  
The morning-glories of many hues  
Are the first to greet the early dews.

The prince's feather nods and bends  
A greeting to its humbler friends,  
While the pansies, with their gentle  
grace,  
Tell the old tale—the stepmother's face.

The tiger lily lifts its head  
Close by a bed of zinnias red;  
The graceful bluebells wave and swing  
And the gorgeous margolds upward fling,

A mass of color, a field of gold;  
And the roses' bloom—O wealth untold!  
The hollyhocks so grand and tall  
Lean over against the garden wall.

A sturdy vine o'er trellised stair  
Lifts its flaming trumpets high in air;  
The poppies and geraniums red  
Make a scarlet coverlet for a bed.

Only the common garden flowers,  
With common sunshine and common  
showers,  
But life is sweeter each summer's day  
For my neighbor's garden just over the  
way. —Churchman.

### Her Poor Old Lad.

"You were just remarking," said the doctor, raising his voice and looking at the three friends seated with him in the library after dinner, "on the phenomenal character of the life in a large seaport city like this, and wondering whether the customs of the poorer classes are affected to any appreciable extent by the speech or manners of the foreign sailors who are continually among them. I myself incline to think that such influence is not so formidable as might be supposed, but incredible things happen at times in the obscure parts of our maritime cities. I can tell you a story which came under my own observation not so very long ago. You know that for some years I was house surgeon in the S—hospital? Well, to-day I have been looking at the alterations they are making between that institution and the Duke's Dock, and I see that among the buildings which are being dismantled there is an old lodging house called the Rovers' Return, in which a strange incident occurred during my stay in that part of the town.

"This house, which on account of its situation near the dock gates, was frequented solely by seafaring men and emigrants of the poorest type, was kept for many years by an old woman, then sixty-five years of age—a good-humored, contented soul, who could neither read or write, and who never in her life had set foot beyond her native town. Whether the stories which filtered to her through her sea-going clients from all quarters of the globe had been too much for her I cannot say, but she was known to have a strong prejudice against those strange and wicked lands beyond the sea, and had been often heard to declare, when any one spoke in her hearing of foreign people, that 'Thank Heaven, she knewed nothing of them!' and 'Please God, she'd live and die in a Christian country!' She was a favorite in the district, since she was chatty, good natured, and in no way held herself to be better than her neighbors, and had, besides, what I have often noticed in illiterate people, an extraordinarily tenacious memory for all the family histories and interests of the district.

"Her husband was a morose old Scot, once, I believe, a weaver, but at that time earning ten shillings a week as a night watchman in the streets. Wrinkled like seaweed, with a mouth so contracted that his nose and chin al-

most met, and with an inscrutable expression of the eyes, this man, who scarcely ever spoke, had been in his youth a strong Radical, a member of several societies for the destruction of society, and actually at the time of his marriage laboring to save the required sum for admission to some utopian colony in America, whose chief law was to be community of goods. But he had met his fate and married, and nothing further was heard of this land of promise. The ten pounds which he had scraped together for this project remained in the savings bank, a provision for old age. This strangely mated couple had one son, a hunchbacked cobbler, who had hard work to live, and who cherished a secret dislike towards his father.

"The old man was, I should think, the most silent person under Heaven; but certainly, for a man who said so little, he appeared to have a good deal confided to him. The box, like a coffin planted on end, in which he sat out the night behind his brazier of glowing coals, so attractive a sight in the cold, dark street, seemed to be a meeting place for wanderers and odd fish of all kinds. Out of the darkness of the overhanging storages these night birds would appear singly, in twos and threes, sometimes in whole companies, attracted like moths to the irresistible center of light and warmth. Watching this circle of haggard faces under the impish freaks of the firelight, one might have thought that this gathering in the midst of heaped timber and road wreckage had the appearance of a conspiracy, as if some dark understanding drew these aliens together.

"As might be supposed, the queerest wanderers afloat came to lodge in that part of the town mariners who appeared at night from one end of the globe and set out in the morning for the other; and on an afternoon in winter two men came to the Rovers' Return, one the captain of a small sailing vessel, surly and red-eyed and full of oaths, and with him his only passenger, a lean bilious looking man of no settled occupation. The old woman, Isabel Ferguson, took a sudden and violent dislike to this lodger, for no apparent reason, seeing that he paid regularly and gave no trouble. But she called him a spy, and, as was remembered afterward, she had been heard to say, 'When that man comes into the room it's time for me to go out.'

"The captain in his turn had settled with himself that it was a point of honor in him to escort his passenger round the sights of the port. Every day, therefore, while the vessel remained in dock he and his friend would set out to see the sights, and since these, to the sailor, meant often the red lamps of the taverns, their journey would always end in one of the innumerable places which entertain those engaged in or attached to maritime pursuits. Once settled in one of these places the captain would refuse to stir; and there he would sit so long as he had money in his pockets, burning himself up with rum, and calling on the crowd who came and went between the swinging doors to live merrily, by which he apparently meant to drink deeply.

"Then his companion, freed from this old man of the sea, would wander about the port, finding his way always at nightfall to the place where old David Ferguson watched by his fire. Seated on a pile of timber, he would observe the gloomy looks of his companions, and with commiseration for their misfortunes, would talk much of America and freedom, of unequal marriage laws, of the shackles of Englishmen, of freedom again and always of America, and once more America, until the circle of outcasts, who had nothing to gain or lose if an empire fell, would sit half through the night in pity for themselves and their mismanaged country. Happening to pass one night, and seeing the close interest of the men, I stayed for a minute to listen. The speaker was describing some ideal State which existed in America, but not until he named the State did it occur to me what the man was after. 'In Utah,' were his words. 'Why! the fellow's a Mormon,' said I to myself; and just then old Ferguson, who had been leaning out of his shed,

his eyes fixed on the fire, his mouth so contracted that it seemed to have disappeared altogether, his attitude expressing the closest attention, bent down to reach coal for his fire, at the same time asking some question of the Mormon which I did not hear.

"'As old as he likes to join,' replied the man. As I came away an old man left the circle and joined me. 'He's got a deal to say for himself that theer,' he observed.

"'It's none of it worth much?' I asked.

"'Eh, I don't know. I pay no attention. I just sits me down and warms myself as always, and then I comes away and leaves him to his talking. But he's plenty to say.' I laughed and bade the old man a good night, and went on home, thinking no more of the matter.

"For nearly two months, it seems, the vessel remained in dock undergoing repairs, and at the end of that time the bibulous captain and his friend disappeared and were never heard of again to my knowledge. Their place at the Rovers' Return was filled at once by other lodgers, and in a short time almost every one had forgotten them.

"It was about a month later that the singular incident occurred which I am about to relate to you. Returning to my house one night I stood for a moment or two at the top of a street looking down upon the river which, with its lights and signals, had the appearance of a vast illumination. Straight down the hill dipped the double row of street lamps, displaying a whirligig of figures in the dark space between. In front of me, upon a blurred expanse which I knew for the opposite bank of the river, was a multitude of tiny, twinkling stars, and stationary, or moving vaguely about on the darkness, like men searching with lanterns, were the red lights of passing steamers. On either side of the river long rows of lamps flung a steady gleam upon that liquid street; high above them swung the enormous lantern of the tower, and far down the great waterway the signal light flashed against the sky swiftly, mechanically, showing the entrance to ships in the channel. Here and there on the dim surface of the river troubled blots of light were floating like lamps washed out to sea. Behind me, turning suddenly, I saw the moon, a great yellow moon rising behind the chimneys and adding its share to the general illumination. It was as if the streets and the heavens were so many blazing ways lighting the wanderers of two worlds to the rim of the great divining cup of the sea in whose uncertain surface they might discern the phantom shapes and figures of futurity.

"Suddenly, as I turned to go down the hill, I became aware of two figures advancing toward me, an old woman, bareheaded and making a moaning sound as she walked, and with her, as it seemed guard upon her, a small hunchbacked man. I recognized them as the landlady of the Rovers' Return and her son, and as they came nearer I could hear that the moaning sound, which came from the old woman, was in reality the rapid utterance of words. Without looking at anything round her she cried: 'Let me go after my old lad, I tell you! I'll not stop here and him on the other side of the world. Oh, my poor lad, I'll follow you—I'll find you somewhere—I'll come to the world's end after you!'

"Here the hunchback caught her by the arm and endeavored to distract her attention. 'Come back home, mother,' he said. 'How can you find him in the wide world, you that never was out of this place in your life? You'll never find him on this side the grave. He's left you for good, and let him go—curse him!'

"'How can I go home?' returned the old woman, distracted for a moment. 'There's no home for me except where my old lad is—him going astray somewhere in the world and perhaps on the sea this very night! There's people in the world that'll tell an old woman the road. Oh, my poor old lad, how could you do it to me? But I'll follow you, I'll follow you!'

"'Come out of the street, mother,' repeated the son.

"'It wasn't well done by me,' continued the old woman. 'I've been a married woman for forty years, and I wish I was dead before I see this day.'

"'And so do I,' returned the son; 'but you must make up your mind to do without him. Come home now, mother, and let him go where he wants. You've got a son left.'

"'It isn't a husband,' cried the old woman. 'My poor old man, wherever have you gone to? And with that they turned into an alley and I saw them no more.'

"As I stood hesitating at the end of the street, which was one of eyeless warehouses, with lamps hung on the wall and niches in which outcasts were lurking, two women came up the hill and stopped not far from me. 'That's what comes of a man that never opens his mouth,' said one, angrily. 'I'd sooner have a man that knocks you about a bit than one of them that you never know what they're thinking of. To leave his lawful wife, and them married forty years! And she's never shed a tear, nor she won't go home. She's wandering in the streets, saying she'll go after him and find him, and she a woman of sixty-five! Oh, them wicked Mormons!'

"At that word, as if I remembered some sin of my youth, the thought of the bilious stranger of the night circle startled me, hit me with such a sense of catastrophe that I turned and spoke to the woman. 'What is the matter?' I asked; 'what has happened?' Confused by my sudden attack their story was incoherent and fantastic to a degree, but it amounted to this: Unknown to all, possibly even unsuspected by himself, some inexplicable and fatal tenacity of purpose had never ceased to exist in the brain of the old Scot. The passion, which seemed to have slept for forty years, had been by the chance visit of the Mormon missionary wrought to such a height that without a word he had gone his way, leaving home and wife at the age of seventy, taking with him the savings gathered so many years before, voyaging to discover in that America of promise the fulfillment of his youthful dream.

"For many days this incident haunted me, but there was a good deal of sickness that year, and through the pressure of other thoughts and much work, its outline had begun to fade, when one day, a bright day with a blue sky, I went to the stage to see the American steamer sail. I amused myself for a time in the keen, alert atmosphere, watching that meeting-place of all nations. The tide was rushing with the speed of a mill sluice, and the tiniest scrap of a sail was visible on that buoyant path. The huge vessel hove above the stage, bowing slowly with the action of the tide like a tethered horse impatient to start. In midchannel the small river steamers hurried panting about their business; a great liner, with men at work in her rigging, lay a dead weight on the water, and a line of barges, uneasy with such a swell of water beneath them, were towed to their quiet dock by a screaming tug. On the stage itself I watched the crowd outside the barriers, the folk in line on the deck of the vessel, the trim-gloved officers, the porters coming and going along the gangway like figures in a child's toy; then returning on the roadway above the river, I saw the scene from a higher level, catching glimpses, across a deep pit of green water, of the crowd moving to and fro against the hull of the great steamer. A few seconds more, and I saw that the huge vessel had moved a step outward and was cautiously feeling her way like a blind creature moving a step at a time.

"As I withdrew my eyes from the beautiful creature, they were caught by a ludicrous figure not many yards from me. By my side, with his eyes fixed on the lessening steamer, standing on tip-toe so that his chin just appeared above the iron railing, and holding high above his head with both hands a two-foot rule with a spotted handkerchief fluttering from the end, was my friend the hunchbacked cobbler, with tears running down his face, unheeding everything but that black steerage deck on which it was impossible longer to distinguish a single figure. Then once



again I remembered that belated emigrant, and understood, as certainly as if it had been told me, that somewhere in the heart of that great vessel which I had watched so carelessly, was the forsaken old woman who had never set foot outside her native port, journeying at the age of sixty-five on an impossible quest over strange and dreaded waters. I guessed how it had been. The neighbors, full of pity for her madness, and seeing that she could never rest, had gathered a sum of money and allowed her to set forth on her hopeless journey. 'So that is the end of it,' I said to myself; and it was virtually the end, for, though I was at some trouble to discover what became of the old couple, no one in the town ever heard of them again. Nor did the son, whose poverty kept him behind, hear; and, indeed, when I think of it, how should he, for his mother could not write, and his father had gone to join the Mormons."—Macmillan's Magazine.

#### Fortune Telling With Dominos.

For an evening's amusement fortune telling has long been in favor. We have, however, grown tired of cards, tea leaves and palmistry, and, with the approach of the social and "sociable" season, long for something along similar lines, yet possessing the charm of novelty. Dominos will, this winter, supply the proper medium for fortune telling, but they must never be consulted on either Monday or Friday.

The room in which the future is to be tested should be of inky darkness, with a half dozen or more white lights set in the form of double-three dominos; and a gown of black and white "polka dot" forms an appropriate costume for the "revealer of destinies."

The dominos should rest face down on a smooth table of white marble, or oil cloth. When the future is to be consulted, the inquirer seats himself at the table, shuffles the dominos and from them draws five dominos. From these the seer must connect a "revelation" of sufficient detail and length. As an aid the following rule is given:

Double-six denotes receipt of money, will be very rich.

Six-five denotes amusement and success.

Six-four denotes early marriage and much happiness.

Six-three denotes constancy and affection.

Six-two denotes orderly, economical and industrious.

Six-one denotes will marry twice, rich in old age.

Six-blank denotes will learn of death of a dear friend.

Double-five denotes will be very lucky in everything.

Five-four denotes will marry poor.

Five-three denotes ample means and eventual wealth.

Five-two denotes unfortunate love affair.

Five-one denotes an invitation to an enjoyable affair.

Five-blank denotes avoid gambling and games of chance.

Double-four denotes lucky to lovers, farmers and laborers.

Four-three denotes neither riches nor poverty.

Four-two denotes a change in your circumstances.

Four-one denotes you will be childless but rich.

Four-blank denotes quarrels and separations, never marry.

Double-three denotes immense riches.

Three-two denotes fortunate in love, marriage and business.

Three-one denotes not favorable.

Three-blank denotes your sweetheart is deceitful.

Double-two denotes thrifty and unsuccessful, moderately rich.

Two-one denotes a life of luxury, but never marry.

Two-blank denotes poverty and bad luck.

Double-ace denotes constancy in love and marriage.

Ace-blank denotes travel in great luxury.

Double-blank denotes selfish, miserly and heartless.—What To Eat.

#### The Real Cougar.

Fables aside, the cougar is a very interesting creature. It is found from the cold, desolate plains of Patagonia to north of the Canadian line, and lives alike among the snow-clad peaks of the Andes and in the steaming forests of the Amazon. Doubtless careful investigation will disclose several varying forms in an animal found over such immense tracts of country and living under such utterly diverse conditions. But in its essential habits and traits, the big, slinking, nearly uni-colored cat seems to be much the same everywhere, whether living in mountain, open plain, or forest, under arctic cold or tropic heat. When the settlements become thick, it retires to dense forest, dark swamp or inaccessible mountain gorge, and moves about only at night. In wilder regions it not infrequently roams during the day and ventures freely into the open. Deer are its customary prey where they are plentiful, bucks, does and fawns being killed indifferently. Usually the deer is killed almost instantaneously, but occasionally there is quite a scuffle, in which the cougar may get bruised, though, as far as I know, never seriously. It is also a dreaded enemy of sheep, pigs, calves, and especially colts, and, when pressed by hunger, a big male cougar will kill a full-grown horse or cow, moose or wapiti. It is the special enemy of mountain sheep. In 1886, while hunting white goats, north of Clark's fork of the Columbia in a region where cougars were common, I found them preying as freely on the goats as on the deer. It rarely catches antelope, but is quick to seize rabbits, other small beasts and even porcupines.

No animal, not even the wolf, is so rarely seen or so difficult to get without dogs. On the other hand, no other wild beast of its size and power is so easy to kill by the aid of dogs. There are many contradictions in its character. Like the American wolf, it is certainly very much afraid of man; yet it habitually follows the trail of the hunter or solitary traveller, dogging his footsteps, itself always unseen. I have had this happen to me personally. When hungry it will seize and carry off any dog; yet it will sometimes go up a tree when pursued even by a single small dog wholly unable to do it the least harm. It is small wonder that the average frontier settler should grow to regard almost with superstition the great furtive cat which he never sees, but of whose prowess sinister proof is sometimes afforded by the deaths, not alone of his lesser stock, but even of his milch cow or saddle horse.

The cougar is as large, as powerful, and as formidably armed as the Indian panther, and quite as well able to attack any man; yet the instances of its having done so are exceedingly rare. The vast majority of the tales to this effect are undoubtedly inventions. But it is foolish to deny that such attacks on human beings ever occur.—From "With the Cougar Hounds," by Theodore Roosevelt in the October Scribner's.

For salad sandwiches pepper grass and watercress should be dipped in French dressing or salted vinegar before using, shaken dry and placed between thin slices of bread and butter.

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# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Oct. 30, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	70 1/4 @ 71 1/4	73 3/4 @ 74 1/4
Thursday.....	71 1/4 @ 72 1/4	74 1/4 @ 75 1/4
Friday.....	71 1/4 @ 72 1/4	74 1/4 @ 75 1/4
Saturday.....	71 1/4 @ 72 1/4	74 1/4 @ 75 1/4
Monday.....	71 1/4 @ 72 1/4	74 1/4 @ 75 1/4
Tuesday.....	71 1/4 @ 72 1/4	74 1/4 @ 75 1/4

### CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	35 1/4 @ 35 3/4	37 1/4 @ 37 3/4
Thursday.....	35 1/4 @ 35 3/4	37 1/4 @ 37 3/4
Friday.....	35 1/4 @ 35 3/4	37 1/4 @ 37 3/4
Saturday.....	35 1/4 @ 35 3/4	37 1/4 @ 37 3/4
Monday.....	35 1/4 @ 35 3/4	37 1/4 @ 37 3/4
Tuesday.....	35 1/4 @ 35 3/4	37 1/4 @ 37 3/4

### SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 00 @ 99 1/2	1 04 1/4 @ 1 04 1/2
Friday.....	1 00 @ 1 00 1/2	1 04 1/4 @ 1 04 1/2
Saturday.....	1 00 @ 1 00 1/2	1 04 1/4 @ 1 04 1/2
Monday.....	1 00 @ 1 00 1/2	1 04 1/4 @ 1 04 1/2
Tuesday.....	1 00 @ 99 1/2	1 04 1/4 @ 1 04 1/2
Wednesday.....	99 1/2 @	1 03 @

### WHEAT.

While outward appearances have indicated a moderately firm market for wheat, when it came to the test of holders endeavoring to realize at any material advance, the firmness was not very apparent or pronounced. It looks as though shippers were endeavoring to advance wheat values in their own interest, having large holdings which they are desirous of unloading at a profit, and to this end are temporarily depressing ocean freight rates as much as possible, being more interested for the time being in wheat than in ships. The wheat they are specially interested in, however, is their own and not the holdings of others. Some of the cargoes recently cleared from this port have shown a clearance valuation of over a dollar per cental, but to obtain a dollar per cental from shippers has been about impossible, unless for exceptionally choice lots, wanted in the filling of special orders, or desirable for topping off cargoes. If shippers succeed in getting farmers to hold off the market while the accumulations through early purchases of these exporters are being unloaded, they will likely then turn bulls on ships and bears on wheat, especially if in the meantime they are able to secure under charter to arrive a good many vessels at comparatively low figures. Ships arrived under charter the past week at 32s 6d, which is 6s 3d or \$1.50 per ton less than freight rates very lately current.

California Milling.....	1 00 @ 1 05
Cal. No. 1 shipping, alongside.....	97 1/4 @ 98 1/4
Oregon Valley.....	97 1/4 @ 1 00
Washington Blue Stem.....	98 1/4 @ 1 03 1/4
Washington Club.....	95 @ 1 00
Off qualities wheat.....	90 @ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s 6d @ 6s 6 1/2 d	5s 10d @ 5s 10 1/2 d
Freight rates.....	4 1/4 @ 4 3/4 s	3 3/4 @ 3 1/4 s
Local market.....	80 93 1/4 @ 96 1/4	97 1/4 @ 1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.00 1/2 @ 99 1/4 c.
May, 1902, delivery, \$1.05 1/2 @ 1.03 1/2.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at 99 1/4 @—c; May, 1902, \$1.03 1/2 @—.

### FLOUR.

The market is without noteworthy change in quotable values or general tone. There is a fair outward movement, much of the flour being shipped representing deliveries on contracts. Trade on local account is not brisk. Spot supplies are more than ample for all immediate needs.

Superfine, lower grades.....	22 25 @ 24 20
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	2 00 @ 2 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

### BARLEY.

Clearances of this cereal from this port continue on much the same liberal scale as for some weeks past, most of the barley going afloat being destined for Europe, but shippers are not purchasing as freely

as they are forwarding, most of the exporters having considerable quantities of barley which they secured earlier in the season. Values are being tolerably well maintained, however, at previously quoted range, both for brewing and shipping grades, and also for feed descriptions, the latter receiving little attention other than on local account. Call Board prices were at a slightly higher range than preceding week, but business in futures was of a light order.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	75 @ 82 1/4
Chevalier, No. 1 to choice.....	97 1/4 @ 1 02 1/4
Chevalier, poor to fair.....	75 @ 90

### OATS.

Values are being sustained at about same range as current for several weeks past, but buyers are not taking held freely at full figures. Most of the local handlers are tolerably well stocked, and do not care to purchase for future needs to any great extent, except at lower prices than have been yet established this season.

White Oats, fancy feed.....	1 25 @ 1 30
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 17 1/2
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 22 1/4 @ 1 27 1/4
Black Russian.....	90 @ 1 20
Red.....	1 00 @ 1 25

### CORN.

New crop California is offering in moderate quantity, but is not meeting with brisk demand, being mostly too damp to be desirable, besides being held in most instances above the views of wholesale operators. Old corn is salable at higher figures than new, but aside from a little Eastern, there is practically none on market.

Large White, good to choice.....	1 45 @ 1 55
Large Yellow.....	1 40 @ 1 50
Small Yellow.....	1 55 @—
Eastern, in bulk (carload lots).....	1 50 @ 1 55

### RYE.

Prices show no improvement. A shipment of 17,954 centals, valued at \$14,300, went afloat this week for Belgium.

Good to choice, new.....	72 1/4 @ 77 1/4
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### BUCKWHEAT.

Scarcely anything doing in this cereal. Quotations are based on latest reported transfers.

Good to choice.....	1 45 @ 1 60
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### BEANS.

Arrivals of new crop continue of goodly proportions, many of the beans coming forward on contracts, but there are enough being offered for sale to give the market a weak tone for most varieties. Colored kinds have been inclining most against sellers, the movement outward at present being more of white beans and Limas than of colored varieties. Many of the beans offering are dirty, having adobe and other foreign matter mixed in with them, necessitating running them through a cleaner, which increases the cost, including shrinkage, of about 15c. per cental. Only for beans in merchantable condition are full current quotations obtainable.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	3 00 @ 3 25
Lady Washington.....	2 25 @ 2 50
Pinks.....	1 95 @ 2 20
Bayos, good to choice.....	2 25 @ 2 40
Reds.....	3 00 @ 3 25
Red Kidney.....	3 00 @ 3 50
Limas, good to choice.....	4 40 @ 4 65
Black-eye Beans.....	3 00 @ 3 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

### DRIED PEAS.

There are more Green Peas offering than there is immediate need for, an unusually large quantity having been grown this season. The market is dull and weak, with prospects poor for speedy recovery from the present unsatisfactory condition. Niles Peas are not in heavy stock and are meeting with moderate demand at existing values.

Green Peas, California.....	1 25 @ 1 75
Niles Peas.....	1 50 @ 1 60

### WOOL.

Business in the local market is of light volume, necessarily so on account of very limited offerings, especially of the kind of wools which for several months past have been receiving the most attention of manufacturers and dealers. Wools now offering here are mainly heavy and defective fleeces, with some odds and ends of other sorts. Values are quotably unchanged, but are largely nominal for heavy and defective stock.

### SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

### FALL.

Humboldt and Mendocino.....	11 @ 12
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Northern Mountain, free.....	9 @ 11
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 1/2 @ 8 1/4
San Joaquin Lambs.....	7 1/4 @ 9

### HOPS.

There are more hops offering than can be accommodated with buyers at the moment at anything near full current rates. Sales being effected in the interior of this State, as also in Oregon and Washington, are mainly within range of 9@10c. One party is reported offering to advance 9@10c. to secure control of hops for the purpose of forwarding them to England and have them there sold on joint account.

Good to choice, 1901 crop.....	10 @ 13
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### HAY AND STRAW.

The market for desirable qualities of hay is firm at the last quoted advance, with no lack of demand at full current figures for choice stock. The last rain tended to impart increased strength to the market for best grades. Seriously damaged and defective stock has to go at comparatively low figures. That choice hay will rule lower this Winter than now quoted is not probable. Straw is not in heavy receipt and is selling to fair advantage.

Wheat, good to choice.....	8 00 @ 12 50
Wheat and Oat.....	8 00 @ 11 50
Oat.....	6 50 @ 9 50
Barley and Oat.....	6 00 @ 8 50
Barley.....	5 50 @ 8 00
Alfalfa.....	8 00 @ 10 00
Clover.....	6 50 @ 8 00
Stock.....	5 00 @ 6 00
Compressed.....	8 00 @ 12 00
Straw, 1/2 bale.....	35 @ 47 1/2

### MILLSTUFFS.

Bran is in fair receipt and is inclining in favor of buyers, although in the matter of quotable values no pronounced changes have been effected. Middlings and Shorts are held about as last quoted, with supplies and demand both light. Rolled Barley rules steady. Prices for Milled Corn are tending to lower levels.

Bran, 1/2 ton.....	19 00 @ 20 00
Middlings.....	20 00 @ 21 00
Shorts, Oregon.....	19 50 @ 20 50
Barley, Rolled.....	16 50 @ 17 00
Cornmeal.....	33 00 @ 33 50
Cracked Corn.....	33 50 @ 34 00

### SEEDS.

Business in Mustard Seed is reported to be of fair volume at previously quoted rates. Spet stocks and offerings are by no means heavy. Not much Flaxseed arriving. Bird seed is steadily held, with only moderate supplies, but sufficient for current needs.

	Per ctl.
Flax.....	2 65 @ 3 25
Mustard, Yellow.....	3 15 @ 3 25
Mustard, Trieste.....	2 85 @ 3 00
	Per lb.
Canary.....	3 1/4 @ 3 1/4
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/4

### BAGS AND BAGGING.

There is very little now doing in this department, and it is altogether probable that market will continue lifeless for some weeks. Values remain nominally as previously quoted.

Calcutta Grain Bags, spot.....	7 1/4 @—
San Francisco Grain Bags, 22x36, spot.....	7 @—
Wool Sacks, 4 lbs.....	33 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 34
Fleece Twine.....	8 1/2 @—
Gunnies.....	— @—
Bean Bags.....	5 1/4 @ 5 1/2
Fruit Sacks, cotton, three sizes.....	6 1/2, 6, 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/4

### HIDES, PELTS AND TALLOW.

Demand for Hides is sufficient to promptly absorb all desirable offerings at full current rates. Pelts are without quotable change, but inquiry for them is not particularly brisk. Tallow stocks are not showing appreciable accumulations. Former prices continue to be maintained.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	11 @—	9 1/4 @—
Medium Steers, 48 to 56 lbs.....	10 @—	8 1/4 @—
Light Steers, under 48 lbs.....	9 @—	8 @—
Heavy Cow Hides, over 50 lbs.....	9 @—	8 @—
Light Cow Hides, under 50 lbs.....	9 @—	8 @—
Stags.....	8 1/4 @—	— @—
Wet Salted Kip.....	9 @—	8 @—
Wet Salted Veal.....	9 @—	8 @—
Wet Salted Calf.....	10 @—	9 @—
Dry Hides.....	16 @—	14 @—
Dry Kip and Veal, 11 to 16 lbs.....	16 @—	13 @—
Dry Calf, under 4 lbs.....	17 @—	15 @—
Salted Horse Hides, large.....	2 50 @—	— @—
Salted Horse Hides, medium.....	2 00 @—	— @—
Salted Horse Hides, small.....	1 00 @—	— @—
Dry Horse Hides, large.....	1 75 @—	— @—
Dry Horse Hides, small.....	1 25 @—	— @—
Dry Colts' Hides.....	50 @—	— @—
Pelts, long wool, 1/2 skin.....	75 @—	1 00 @—
Pelts, medium, 1/2 skin.....	50 @—	75 @—
Pelts, short wool, 1/2 skin.....	30 @—	40 @—
Pelts, shearling, 1/2 skin.....	15 @—	30 @—
Deer Skins, best summer.....	35 @—	— @—
Deer Skins, good medium.....	— @—	30 @—

Deer Skins, thin winter.....	— @ 20
Elk Hides.....	10 @ 12
Tallow, good quality.....	5 @ 5 1/4
Tallow, No. 2.....	4 @ 4 1/4
Goat Skins, perfect.....	30 @ 37 1/4
Goat Skins, small.....	10 @ 20
Kid Skins.....	5 @ 10

### HONEY.

Net much arriving here, nor are spot stocks of large proportions, either of Comb or Extracted. While demand is not brisk at full current rates, buyers are not able to obtain noteworthy concessions in their favor, especially where most desirable qualities are sought after.

Extracted, White Liquid.....	5 1/4 @—
Extracted, Light Amber.....	4 1/4 @—
Extracted, Amber.....	4 @—
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7

### BEESWAX.

Offerings are of quite limited volume, and buyers willing to pay full current figures are as a rule found without difficulty.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 25

### LIVE STOCK AND MEATS.

No changes of moment have been developed in quotable values or the general tone of the market for either Beef, Mutton or Hogs since date of last review. Packers are handling without trouble all the hogs they are securing at current figures.

Beef, first quality, dressed, net 1/2 lb.....	6 @ 6 1/4
Beef, second quality.....	6 @—
Beef, third quality.....	5 1/4 @—
Mutton—ewes, 6@7c; wethers.....	6 1/4 @ 7
Hogs, hard grain fed, medium.....	5 1/2 @ 6
Hogs, small, fat.....	5 1/2 @ 6
Hogs, large, hard.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	7 1/4 @ 7 1/4
Veal, small, 1/2 lb.....	7 @ 9
Veal, large, 1/2 lb.....	7 @—
Lamb, spring, 1/2 lb.....	7 1/4 @ 8

### POULTRY.

The same weak and depressed condition of the poultry market, noted in last review, has since then continued to be experienced most of the time. With heavy arrivals and offerings of Eastern poultry, and low prices current on the same, there was little demand for California stock. About the only exception was choice Brelers, nothing of consequence to take the place of this description arriving from the East.

Young Turkeys, full grown.....	14 @ 15
Hens, California, 1/2 dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	3 50 @ 4 50
Fryers.....	3 25 @ 3 50
Broilers, large.....	3 50 @ 3 75
Broilers, small.....	3 25 @ 3 50
Ducks, old, 1/2 dozen.....	3 00 @ 3 50
Ducks, young, 1/2 dozen.....	3 50 @ 4 50
Geese, 1/2 pair.....	1 50 @ 1 75
Goslings, 1/2 pair.....	1 50 @ 1 75
Pigeons, old, 1/2 dozen.....	1 25 @ 1 50
Pigeons, young.....	1 75 @ 2 00

### BUTTER.

Prices for all grades continued within much the same range as preceding week, but market lacked firmness, especially for other than most select. Arrivals are on the increase, but the proportion of choice to fancy is not heavy.

Creamery, extras, 1/2 lb.....	28 @—
Creamery, firsts.....	24 @—
Creamery, seconds.....	21 @ 22
Dairy, select.....	23 @ 24
Dairy, firsts.....	20 @ 21
Dairy, seconds.....	18 @—
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll, 1/2 lb.....	19 @ 21
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/4

### CHEESE.

Market for mild new is quite firm, such stock commanding in a small way higher figures than are quotable. Well seasoned cheese is in fair supply, but is being in the main very steadily held.

California, fancy flat, new.....	11 1/4 @ 12 1/4
California, good to choice.....	10 1/4 @ 11 1/4
California, fair to good.....	9 1/4 @ 10 1/4
California, "Young Americas".....	12 1/4 @ 13 1/4

### EGGS.

Fancy fresh are not in large receipt, neither are many required to satisfy the demand for same at existing rather stiff prices. To command top figures, the eggs must be uniformly large, white, clean and faultless in every respect. Pullets' eggs are arriving rather freely, and these do not move readily, even at comparatively low prices. Cold storage eggs are now being used extensively, with stocks and offerings heavy, both of Eastern and domestic.

California, select, large
---------------------------



portions. Tomatoes averaged lower than preceding week, the inquiry being only for immediate use. Green Corn has about disappeared from market and is not now quotable in a regular way. Summer Squash was scarce and higher. Prices for other vegetables in season showed little variation from those of previous week.

Beans, String, # lb.	1 1/4 @ 3
Beans, Lima, # lb.	2 @ 3
Cabbage, choice garden, # 100 lbs.	50 @ 75
Cauliflower, # dozen	40 @ 50
Corn, Green, # box	— @ —
Corn, Green, Alameda, # large crate	— @ —
Cucumbers, Bay, # large box	25 @ 40
Egg Plant, # box	40 @ 50
Garlic, # lb.	2 @ 2 1/2
Okra, Green, # box	40 @ 50
Onions, Yellow Danver, # cental.	1 15 @ 1 40
Peas, Sweet garden, # lb.	2 1/2 @ 3
Peppers, Green Chile, # sack	50 @ 65
Peppers, Bell, # box	50 @ 75
Squash Summer, # small box	— @ —
Summer Squash, Bay, # large box	75 @ 1 00
Tomatoes, # large box	20 @ 35
Tomatoes, # small box	— @ —

#### POTATOES.

There has been a fairly active shipping demand, mainly for Sacramento river potatoes, these being the lowest priced stock on market. Values have not changed materially, but the general tone has been firm, and prospects are that any fluctuations in the near future will be in the main to stiffer values. Fancy qualities have sold at much the same figures as current for some weeks past, the demand for this description at current rates being limited and mainly local.

Burbanks, Salinas, # 100 lbs.	1 15 @ 1 40
River Burbanks in sacks, # cental.	50 @ 85
Mission Garnet Chile, in sacks	90 @ 1 20
Sweets, new, # cental.	65 @ 85

#### The Fruit Market.

#### FRESH FRUITS.

Apples are in fair supply, being at present better represented than any other deciduous fruit. The proportion of choice to select stock is not heavy, and for this class the market is firm at quotations, with prospects of so continuing. Common and defective qualities have to go at rather low figures, depending for custom principally on buyers who look more to price than to quality, and who will not operate at high or stiff figures. Pears were offering in moderate quantity, with movement in them not very lively, and for other than most select the market could not be termed favorable to sellers. The range of prices for Pears remained about as last quoted, although fancy Winter Nells sold above quotations. Grapes showed reduced receipt, both Table and Wine sorts, and tendency of the market for most desirable stock was to more firmness, but no very pronounced advances were established in quotable rates for the ordinary run of offerings. Choice brought improved figures. Persimmons were in only moderate stock, but failed to move very rapidly, being mostly rather green or hard, and having to depend mainly for custom on local consumers looking for ripe fruit. Berries of most kinds made a very limited display, but aside from a few fancy Longworth Strawberries, which sold to good advantage, the market was easy in tone, with inquiry slow. The Watermelon season is about ended, and Cantaloupes will soon be a thing of the past for the current year.

Apples, fancy, # 4-tier box	1 25 @ 1 50
Apples, good to choice, # 50-lb. box	50 @ 1 05
Apples, common to fair, # 50-lb. box	35 @ 50
Apples, green, # 50-lb. box	35 @ 60
Cantaloupes, # crate	60 @ 1 25
Figs, # 2-layer box	75 @ 1 25
Grapes, Cornechon, # crate	60 @ 85
Grapes, Isabella, # crate	60 @ 85
Grapes, Black, # crate	50 @ 75
Grapes, Muscat, # crate	50 @ 75
Grapes, Tokay, # crate	50 @ 75
Grapes, Zinfandel, # ton	28 00 @ 31 00
Grapes, White, # ton	25 00 @ 28 00
Nutmeg Melons, # crate	40 @ 75
Peaches, # box	90 @ 1 00
Pears, Winter Nells, # 40-lb. box	75 @ 1 50
Pears, other kinds, # box	50 @ 1 00
Persimmons, # box	75 @ 1 00
Pomegranates, # box	50 @ 75
Quinces, # box	40 @ 65
Raspberries, # chest	4 00 @ 6 00
Strawberries, Longworth, # chest	6 00 @ 8 00
Strawberries, Large, # chest	3 50 @ 5 00
Watermelons, # 100	— @ —
Whortleberries, # lb.	5 @ 6

#### DRIED FRUITS.

There has been little developed in the way of change or noteworthy feature in the market for cured and evaporated fruits since last review. Trading is in the main of a light order and mostly of a jobbing character from second hands. Stocks are largely in control of the wholesale dealers and, to purchase freely of most descriptions, prices much the same as have been current for some weeks past would have to be paid. Jobbers and retailers, either East or here, are not taking hold, however, in a manner necessary to give a healthy tone to the market.

Apricots rule fairly steady, with stocks rather light, especially of high-grade fruit. Apples show weakness, although not quotably cheaper for evaporated than last noted. Ordinary sun-dried are lower, and the quality of offerings would at this date have to be above the average to find ready custom within range of the reduced quotations. Peaches are in fair supply, and where buyers are not overly exacting in the matter of quality, moderate concessions from full current rates are obtainable. Although the pack of figs was curtailed considerably by early rains, the market at present is not firm, the lack of strength being due to light movement and not to heavy offerings. No great amount of activity would be required, however, to impart to the dried fruit market throughout a decidedly improved tone and, with the entire Winter to go through, there is ample time for the development of a better condition than is considered at all probable by those inclined to be pessimistic. Prunes are being offered at such low figures that it would seem useless to try to attract buyers by making further cuts. That the recent declines have improved the demand to any marked extent is not apparent. Old Prunes are now quoted at 2 1/2 @ 2 3/4 c. for the 4 sizes and new are offering at 2 1/2 @ 3 c., the latter figure for Santa Claras.

#### EVAPORATED OR BLEACHED.

Apricots, Royal, prime	7 @ 7 1/2
Apricots, Royal, choice, in sacks, # lb.	8 @ 8 1/2
Apricots, Moorpark	10 @ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy	7 @ 7 1/2
Apples, 50-lb boxes, rings, pressed, good to choice	5 1/2 @ 6
Figs, pressed	5 @ 6 1/2
Nectarines, # lb.	5 @ 6 1/2
Peaches, unpeeled, fancy	7 @ 7 1/2
Peaches, unpeeled, choice	6 @ 6 1/2
Peaches, peeled, in boxes	12 @ 14
Pears, halves, choice to fancy	6 @ 8 1/2
Plums, Red and Black, pitted	5 @ 6
Plums, White and Yellow	5 @ 6
Prunes, 4 sizes, in bags, 2 1/2 @ 3 c; 50-60s, 4 @ 4 1/2 c; 60-70s, 3 1/2 @ 3 3/4 c; 70-80s, 3 @ 3 1/2 c; 80-90s, 2 1/2 @ 3 c; 110s and less, 2 @ — c.; these figures for 1901 crop; Old Prunes, 1/2 @ 1/4 c. less.	

#### COMMON SUN-DRIED.

Apricots	6 @ 6 1/2
Apples, sliced	2 1/2 @ 4
Apples, quartered	3 @ 4
Figs, Black	2 1/2 @ 3
Figs, White	2 1/2 @ 3 1/2
Peaches, unpeeled	5 @ 6
Pears, prime halves	5 @ 6
Plums, unpitted, # lb.	1 1/2 @ 2 1/2

#### RAISINS.

The market continues to show unsettled condition, although official quotations are unaltered. Handlers are exercising caution in making sales, however, it being the exception where there is desire shown to book heavy orders at current rates.

Following are the prices for new crop, as fixed by the Fresno Association and the Raisin Exchange:

Descriptions.	Ass'n.	Ex.
Loose Muscatels—	Per lb.	Per lb.
4-crown	4 1/2 c	5 1/2 c
3-crown	4 1/2	5
2-crown	3 1/2	4 1/2
Seedless Muscatels	4 1/2	5
Seedless Sultanas	5 1/2	6
Thompson's Seedless	6 1/2	..
Bleached Sultanas—		
Fancy	8 1/2	..
Choice	7 1/2	..
Standard	6 1/2	..
Prime	5 1/2	..
Bleached Thompson's—		
Extra Fancy	11	..
Fancy	10	..
Choice	9	..
Standard	7 1/2	..
Prime	6 1/2	..
Seeded—		
Fancy	6 1/2	..
Choice	5 1/2	..
Clusters—	20-lb. bxs.	20-lb. bxs.
Imperial	\$3 00	\$3 00
Dehesa	2 50	2 50
Fancy	1 75	..
4-crown	1 60	..
London Layers—		
2-crown	1 10	1 25
3-crown	1 20	1 35
4-crown	..	1 75

#### CITRUS FRUITS.

Orange market is quiet, with both old and new crop offering at reduced figures. It is the exception where new crop oranges are ripe enough to be palatable. Lemons are selling at generally unchanged rates, but are not moving very freely. Limes are in increased supply and lower.

Oranges—Navels, # box	3 00 @ 4 00
Valencias, # box	3 00 @ 4 00
Lemons—California, select, # box	2 50 @ —
California, good to choice	1 75 @ 2 25
California, common to fair	1 00 @ 1 50
Grape Fruit, # box	2 50 @ 3 50
Limes—Mexican, # box	4 00 @ 4 50

#### NUTS.

Almond market shows weakness, recent sales being at lower prices than lately asked. Walnuts are meeting with fair demand, non-Association stock selling 1/4 c. to 1/2 c. under Association prices.

California Almonds, shelled	17 @ 21
California Almonds, paper shell, # lb.	10 1/2 @ 12
California Almonds, soft shell	7 1/2 @ 9
California Almonds, hard shell	5 @ 6

Cal. White Walnuts, No. 1 soft shell	9 @ 9 1/2
Cal. White Walnuts, No. 2 soft shell	7 @ 7 1/2
Cal. White Walnuts, No. 1 hard shell	8 1/2 @ 9
Cal. White Walnuts, No. 2 hard shell	6 1/2 @ 7
Cal. Chestnuts	8 @ 12 1/2
Peanuts, California, fair to prime	4 1/2 @ 5 1/2
Peanuts, Eastern, hand-picked	5 1/2 @ 6
Pine Nuts	5 @ 6

#### WINE.

It is too early for this season's wines, and too late for last season's product, so far as wholesale transfers from first hands are concerned. There are practically no wines of 1900 vintage now offering from producers. Wholesale values for dry wines of 1900 are nominally 25 @ 30 c. per gallon. The market for this year's dry wines is expected to open at 20 @ 25 c. per gallon, and some very choice stock will probably touch higher figures. Owing to decreased production, the market shows decided firmness, and it is not likely that for several years to come prices will be any more favorable to buyers.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks	130,021	2,169,826
Wheat, centals	175,706	1,942,064
Barley, centals	250,212	2,564,188
Oats, centals	40,445	443,508
Corn, centals	2,310	22,518
Rye, centals	1,980	18,165
Beans, sacks	55,820	218,936
Potatoes, sacks	27,519	407,579
Onions, sacks	6,537	111,280
Hay, tons	3,639	52,693
Wool, bales	997	31,112
Hops, bales	665	4,195

#### EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks	95,580	1,661,242
Wheat, centals	150,890	1,662,709
Barley, centals	180,023	1,778,443
Oats, centals	20	2,094
Corn, centals	..	7,992
Beans, sacks	1,478	12,073
Hay, bales	40	4,613
Wool, pounds	112,500	511,816
Hops, pounds	48,904	171,944
Honey, cases	229	2,761
Potatoes, pack's	1,045	14,040

#### California Dried Fruit at New York.

NEW YORK, Oct. 30.—Evaporated apples, common, 6 @ 8 c; prime wire tray, 8 1/2 c; choice, 9 c; fancy, 9 1/2 @ 9 3/4 c.  
California Dried Fruits.—Not much doing, but values are fairly steady.  
Prunes, 3 1/2 @ 7 c.  
Apricots, Royal, 8 1/2 @ 13 c; Moorpark, 9 @ 13 c.  
Peaches, unpeeled, 6 @ 9 1/2 c; peeled, 11 @ 15 c.

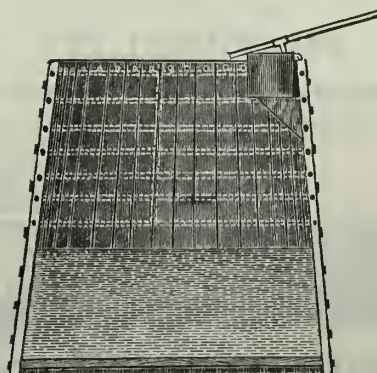
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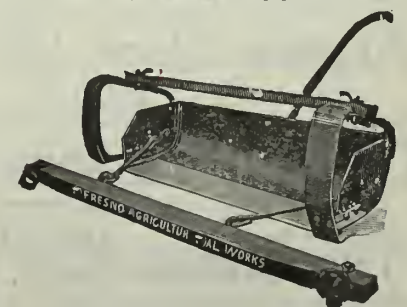
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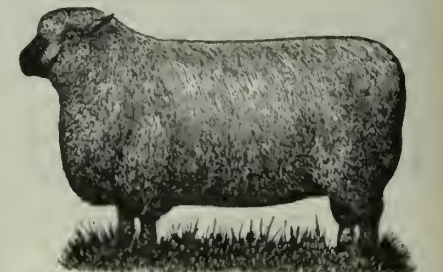
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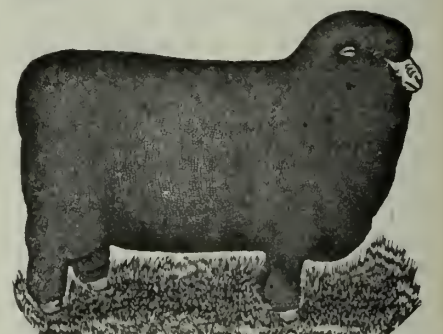
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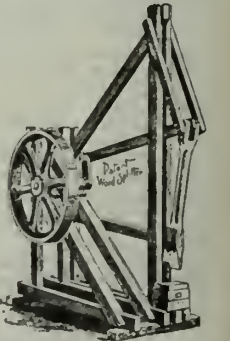
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Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 5 oz. salt to 1 gallon water for 7 days. Put in brine 10 oz. salt to gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles scalded in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom: a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

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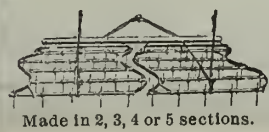
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### Tulare Grange.

TO THE EDITOR:—Tulare Grange met on the 19th at its hall. An excellent lunch was had. It is found that these lunches add much to the sociability of the meetings.

Bro. Shoemaker read a resolution of respect to the memory of Bro. John S. Shellmeyer of Elk Grove Grange, P. of H., which was passed, a copy of it to be sent to his family.

The Worthy Master made a report of the State Grange meeting.

The committee, selected at the last Grange meeting, to arrange a programme of subjects and work for the Grange for the next six months, reported.

The question box was opened and the subjects mentioned discussed: 1. Reason for and Length of Time in Sulphuring Fruit. 2. Ticks on Chickens. 3. Moths in the House and in Clothing.

The November subject of the National Grange Quarterly Bulletin is, "What Can We Do to Make Our Farm Homes More Convenient, Comfortable and Attractive?" with supplementary subject, "What Books Should Find a Prominent Place in the Farm Home, and What of Their Importance?"

Bro. Shoemaker presented the officers of the Grange with handsome new badges.

Bro. Beaver moved that every member of the Grange is hereby appointed a committee of one to attend and bring all other taxpayers he or she can to the meeting on Thursday and to work for a compromise with the holders of the district bonds. J. T.

Phosphorus is found in eggs, fish, oysters, lobsters, game, cheese and potatoes, and these should be freely eaten by the brain worker. Another element that enters into body building is sulphur, which is required for growth of hair, nails, bones and cartilage. Of these there is so much found in eggs that silver is darkened by contact with them. Curd of milk and cheese are also rich with sulphur. Iron is also

present in the blood and is found in most articles of food, being most abundant in the juice of beef, in eggs and in milk. Lime and salt are also needed for the body, the lime making bone, while salt aids digestion. Lime is found in all grains, in wheat and in milk. Nothing is more healthful for growing children than bread and milk.

### Good Times for Western Farmers.

Their wheat crop is worth more than last year's by \$150,000,000.

Other grains represent as large a total value this year as last, the shortage in yield of corn being made up by advance in price.

Potatoes are so high that the short crop will probably return more money to the farmer than ever before.

Live stock represents a value of nearly \$250,000,000 over last year.

Apples and other fruits are extraordinarily high.

The farm products of the United States this year are doubtless worth \$400,000,000 more than last year's output.

The cereals (wheat, corn, oats, rye and barley) raised in the United States during the past five years represent a value to the farmer of \$6,250,000,000, or an increase of nearly \$1,000,000,000 over the preceding five years.

Cotton growers have netted \$400,000,000 more for the past five crops (1901 crop estimated) than for the previous five crops.

Taking 1896 as a fair basis of values during the late agricultural depression, nine staple crops for this year represent an increase in value of over \$700,000,000. Live stock is worth \$1,000,000,000 more now than then.

During the past five years agricultural exports have been \$938,000,000 greater in value than for the preceding five years—a gain of 30%—while exports of manufactures have almost doubled in value. The excess of exports over imports is nearly three-fold that of 1892-96. Whereas in the former period the United States lost \$220,000,000 in gold, during the past five years it gained \$192,000,000, or a net addition to the nation's gold supply of \$412,000,000. The total stock of gold in the United States now (\$1,125,000,000) is double what it was five years ago, and the per capita circulation of money (\$28) is 33% greater now than then.

With a keen foreign demand for our surplus, the American farmer certainly rejoices in a glorious prospect for profits, prosperity and happiness.—Orange Judd Farmer.

### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING OCT. 15, 1901.

- 684,505—WEIGHING MACHINE—J. W. Berry, Tacoma, Wash.
- 684,405—SLIDING DOORS—A. & M. C. J. Bille, Spokane, Wash.
- 684,598—BOILER—M. P. Boss, S. F.
- 684,494—VALVE GEAR—H. G. Campbell, Portland, Or.
- 684,565—AIR COMPRESSOR VALVE—W. H. Caster, Angels Camp, Cal.
- 684,677—JOURNAL BOXES—J. S. Cook, Tacoma, Wash.
- 684,604—CONDUIT PIPE—A. S. Dixon, Los Angeles, Cal.
- 684,767—OIL CUP—O. C. Duryea, Los Angeles, Cal.
- 684,501—GAS GENERATOR—F. C. Faxon, S. F.
- 684,578—RECOVERING METALS—C. W. Merrill, Alameda, Cal.
- 684,449—TRASH FEEDER—R. S. Moore, Oakland, Cal.
- 684,538—RAILWAY CROSSING—E. M. Rankin, Los Angeles, Cal.
- 684,720—STANCHION—R. T. Reid, Tacoma, Wash.
- 684,591—POWER HEAD—G. L. Stearns, Los Angeles, Cal.
- 684,530—TONGUE SUPPORT—I. L. Umstead, Camarillo, Cal.

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This is the highest and only award of its kind on Cream Separators. One other make of machine has received a Silver Medal and another concern a Gold Medal for its combined exhibit of cream separators, Babcock testers, churns and other apparatus. With characteristic advertising honesty, the latter concern is claiming this Gold Medal to be an award to its separators.

### OTHER GREAT EXPOSITIONS.

The supremacy of the De Laval machines at Buffalo is a continuation of their triumphant record at all previous great expositions. At the World's Fair, Chicago, in 1893, they received the Gold and only medal awarded by the regular jury of awards and were the only separators used in the Model Dairy. At Antwerp in 1894 and at Brussels in 1897 they received the Grand Prizes or highest awards. At Omaha in 1898 they received the Gold Medal, and again at Paris in 1900 the Grand Prize or highest award.

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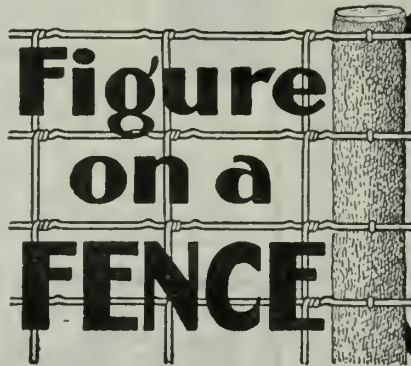
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# PATENTS

Our U. S. and Foreign Patent Agency presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, our Washington branch which tends exclusively to our business before the Patent Office, intimate acquaintance with the subjects of inventions in our own community, and our most extensive reference library, containing official American reports since 1790, with full copies of U. S. Patents since 1872. All worthy inventions patented through DEWEY, STRONG & CO.'S Patent Agency will have the benefit of a description in the *Mining and Scientific Press*. We transact every branch of patent business, and obtain patents in all countries which grant protection to inventors. The large majority of U. S. and foreign patents issued to inventors on the Pacific Coast have been obtained through our agency. We are conservative and counsel preliminary examinations in cases of doubtful novelty. Guide to inventors sent on request.

## DEWEY, STRONG & CO.

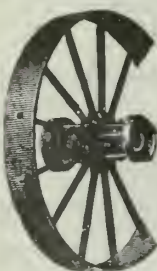
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Chicago, Ills. West Chester, Pa.



### Vinegar From Wine.

TO THE EDITOR:—We have quantities of grapes, but, like many farmers' households, have been dependent upon somewhat dubious vinegar from the grocer's. Will you kindly state through your valuable columns how a farmer, or his wife, may make a domestic supply of vinegar from grapes?—HOUSEWIFE, Jackson.

We know of no way of making vinegar from grapes without first making the grapes into wine. Our California white wines contain from 14% to 18% alcohol according to where they have been raised, the wines from the foothills being much heavier than those from the lower lands, especially if they have been irrigated. For vinegar, you do not want more than 8% or 9% alcohol, so you have to add from three-fourths to one part of water; the best is rain water, or else take spring water and boil it for awhile; pour the mixture into a barrel or pipe, but don't quite fill it up; bore a hole in each head near the bungstave to give a good circulation of air, and close the bunghole with a bottle, neck down; keep as near as you can at a temperature of from 80° to 86° and if your vinegar gets sufficiently sour, draw off and refill, and it will sour much quicker the next time. To create a quicker fermentation you can add some yeast of any kind, sour dough, or, if you can get it, mother of vinegar, in filling the barrel the first time—afterward it is not necessary.

Wine or any other alcoholic liquor of moderate strength will, if left to itself in contact with the air, ultimately turn into vinegar, the alcohol absorbing oxygen, and being thus transformed into acetic acid through the aid of a microscopic organism. This process, however, is too slow to admit of its being adopted in practice, and several methods, having for object the more rapid oxidation of the alcohol, are had recourse to.

In France, three principal methods are adopted, which may be enumerated as follows:

1. The Orleans process.
2. The German process.
3. The Luxembourg process.

The Orleans process is the one which was formerly the most used. It enables excellent vinegar to be made, but is somewhat slow.

In the first place, the temperature of the building in which the vinegar is to be made must exceed 70° Fahr. Provision must also be made for good ventilation. In this building the casks in which the vinegar is to be made are placed. These casks, capable of containing about 100 gallons, have a hole about 6 inches in diameter made in the upper part of the front head, in order to admit air. About twenty-five gallons of good, strong vinegar are placed in each cask, to which three gallons of the wine to be acetified is added every week until the cask is half full. It should then be left alone for a fortnight, by which time it will be converted into vinegar. One-half of this is then racked off, and the same process gone through again, care being taken to always leave twenty-five gallons in the casks after each racking.

The German or rapid process differs considerably from the above, and consists in causing the wine, heated to 80° Fahr., to trickle slowly over shavings in a cask, in presence of plenty of air. The wine should be passed three or four

times through the cask, when the acetification will be complete.

The Luxembourg process is a modification of the former one, and consists in leaving the liquid in contact with the shavings—for which marc (the refuse of the vintage) may be substituted—during the day, while this is exposed to the air during the night. This result may be brought about in different ways. Two casks may be employed—one containing the marc, and so arranged as to allow of the entry of air once the liquid has been removed, and the other as a reservoir for the latter during the night.

Another process which gives very good results is to place the wine in rotating casks which are filled with shavings. These casks are only one-quarter or thereabouts filled the wine to be treated, and an opening is provided in the center of each head to allow the free entry of air. These casks are turned round once every three hours, thus bringing fresh portions of liquid in contact with the shavings. Although not so rapid as the German method, this process is sufficiently so for practical purposes, in addition to which it presents the advantage of causing less waste. With the German process the loss through evaporation may become considerable.

The first, or Orleans process, is the one which produces vinegar with the best flavor and aroma, as the volatile perfume ethers formed are less likely to be lost through evaporation.

When making vinegar, it is well to see that the wine does not contain more than 20% of proof spirit. If necessary, it may be reduced by the addition of water.

### Good Way Up the Coast.

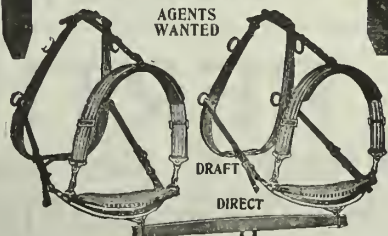
Mr. Wm. C. Grant, one of our British Columbia subscribers, sends this kindly word: "Of all the horticultural papers I subscribe for the PACIFIC RURAL PRESS is first, being more suitable in general to the conditions of the Pacific coast. The market quotations alone are worth many times the subscription price."

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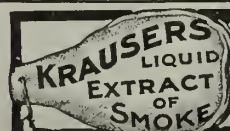
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HE WON THE

## Gold Medal

AT THE

## Pan-American Exposition



in spite of the "would-be competitors" fiercest opposition, who imagined that everything was fixed to come their way, and who had a lawyer in their interests almost constantly at Buffalo; but, oh, what a disappointment when they found that they were not the "Only Pebble on the Beach."

Our "would-be competitors," the DeLaval Separator Co., rehearse at great length their view of how the U. S. Separator beat them at the Pan-American, but the fact remains just the same that the U. S. did beat them by its work in the Model Dairy.

Now, to draw attention away from the actual workings of the Separators, these "would-be competitors" begin to shout "fire" and talk much about sparks that caught in the roof of some boiler-house, instead of giving the actual tests of the Separators.

These "would-be competitors" go back to the World's Fair, Chicago, and state "they received the gold and only medal awarded by the regular jury." Everybody who knows anything about that Fair knows that the DeLaval Company received no Gold Medal, and all they got was a Bronze Medal.

It is true they did have the jury fixed to their liking, and that jury turned everybody down but themselves, but when it was shown to the Fair officers that this jury was made up of DeLaval agents and partisans, they immediately appointed a new jury, and that jury awarded the **Vermont Farm Machine Company twelve medals of highest merit** on its different articles of manufacture; twelve times as many awards as our "would-be competitors" the DeLaval Company got.

At Paris, 1900, the DeLaval Separator Co. had no exhibit or Separators. Their foster-father, the Aktiebolaget Separator of Stockholm, Sweden, did have a big exhibit, but no prize was awarded them by the regular or class jury. When the class jury was examining the separators, our representative urged that the separators be tested to prove our claims of superior merits, and also presented a written request that such tests be made, but was informed by the jury that the DeLaval Company's foster-father, the Aktiebolaget Separator, objected to tests, claiming that it would take six months (three in Winter and three in Summer) to make reliable tests.

Every one knew this was only for a bluff to prevent tests, and the jury so looked upon it, and gave the Aktiebolaget Separator no prize, and the official list of the prizes published and distributed at the Paris Exposition did not contain any award to the Aktiebolaget Separator or the DeLaval Separator Co.

The Aktiebolaget Separator Co., of course, were dissatisfied, and appealed to the Grand or Superior Jury. They got the King of Sweden to make a personal appeal to the jury for them when he was on a visit to the Paris Exposition, and also the Swedish Minister to France, and the Swedish Commissioner-General to the Exposition made personal appeals to the Grand or Superior Jury in behalf of the Aktiebolaget Separator and its child, the DeLaval Company, and made it a political matter, so that it is now reported that when the revised list of prizes, which is not yet published, is issued, it will contain notice of an award to the Aktiebolaget Separator Co.

The above statement can be proved as correct. The DeLaval Company and their foster-father had to get the King and the Minister and the Commissioner to use their political influence before they could get an award at Paris, and then only on an appeal to the Superior or Grand Jury.

We ask the dairy public how much that reflects on the merits of the DeLaval Separator, and who it is that does the "after pulling and hauling which unsuccessful exhibitors always resort to?"

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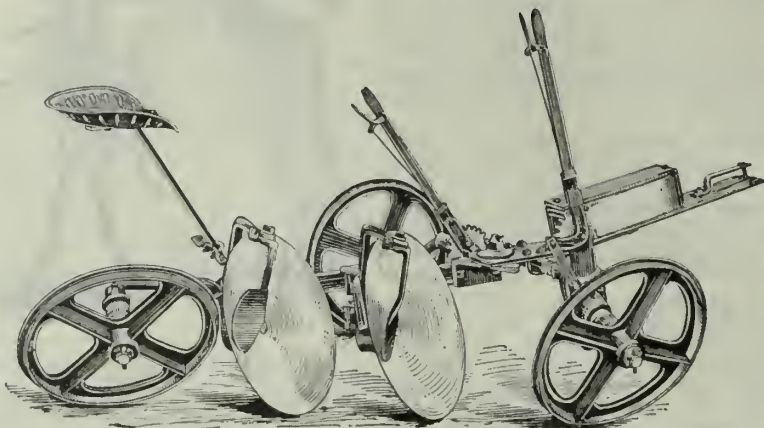
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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 19.

SAN FRANCISCO. SATURDAY, NOVEMBER 9, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

## The Date Palm.

We recently awarded full honors to the Canary Island date as our handsomest hardy palm and gave a good portrait of such a plant. By contrast with that, the engraving on this page will make quite clear the characteristic aspect of the fruiting date, which is becoming quite a common plant in the horticultural regions of California and Arizona. The present engraving shows one of the older plants brought into the country from the Mediterranean region by the United States Department of Agriculture ten years ago and planted on the grounds of the Experiment Station near Phoenix. The full account of this and a later information of date plants was given in the PACIFIC RURAL PRESS in November, 1898. A recent publication of the Arizona station by the horticulturist, A. J. McClatchie, shows that the production of dates is coming upon a commercial basis in that Territory. During the past year 300 trees at the Experiment Station farm near Phoenix bore over 500 pounds, the fruit ripening between August and January. The portion placed upon the market sold at 25 cents per pound, wholesale, at Phoenix. The seedling trees in various parts of Arizona bore last year 40 to 200 pounds per tree.

We receive from time to time specimens of fruit from seedling dates growing in California. Occasionally the fruit is perfect, but usually imperfect from lack of pollination. The date should have a good seed, not for the sake of the seed, but because the pulp is better and freer from fibrous matter. Growers of such fruit can take a hint from Prof. McClatchie's explanation that date trees, unlike most other fruit trees, bear the two essential parts of the flowers on different trees. Hence it is necessary either that pollen-bearing trees be grown near fruit-bearing trees, or that pollen be brought to the latter. If pollen-bearing trees do not grow within 30 or 40 feet of fruit-bearing ones, it will be necessary to cut away clusters of the pollen-bearing flowers and hang them in the fruit-bearing trees. This must be done very soon after the female flowers appear, or it will be too late for fertilization to take place. If pollinated too late, the result often is the development of a few of the later blossoming flowers, while the rest remain undeveloped and seedless. It is not necessary to depend upon the pollen produced the same year that it is desired to pollenate the female blossoms, since pollen may be kept from year to year and dusted upon the clusters of female flowers at the proper time. After having made sure that the female flowers have been adequately pollinated, the date trees will require little attention, except occasional watering, for several months.

As the dates approach their full size, it is important that the trees be supplied with an abundance of water, it being

impossible to give them too much water from the time the fruit begins to ripen until it is fully matured. A good way to insure a thorough soaking of the soil about the roots of the trees is to make a basin 15 to 25 feet in diameter, by excavating some of the soil and throwing up a circular ridge, and then to fill the basin with water about once a week, if the soil is deep and light. If more retentive, less frequent irrigation will be better.

## Foxtail or Wild Barley.

It is not necessary to show foxtail to older Californians, but there are new-comers who are still in blissful ignorance of this hateful plant. We call it hateful because, though of some account as winter pasturage when young, it becomes as the season advances both a nuisance and a positive injury. It has been in California a long time, and yet some can remember when the fields were free from it. Whenever a new settlement is made it soon comes sneaking in along the roadways or with alfalfa seed, or in other ways too numerous to mention. The plant is a winter grower, like common barley. It grows well at a temperature too low for alfalfa, soon getting possession of the fields, so that the first cutting of alfalfa in some localities is largely foxtail, and has to be fed or siloed; or, as is too often the case, is burned because of lack of stock to turn it to account. The plant has recently appeared in full force in Arizona, and our picture is from a portrait made at the Arizona Experiment Station. Prof. McClatchie explains in an interesting way how it is that foxtail holds its own in alfalfa fields which are frequently mown or used for pasture. When young, it is eaten quite freely by cattle, but as it approaches maturity it is avoided by them, and thus gets an opportunity to produce seed. Even when grazed quite closely it manages to produce short-stemmed heads that the cattle avoid. The reason it is allowed to mature seed in pastures, as cultivated barley would not be, is that the grain is very small and the beards very rigid and very irritating to the mouths of stock. Consequently the wild barley succeeds in producing a good crop of seed with which to sow the ground for the coming season.

To eradicate this weed would be practically impossible, but much can be done to check its spread and to decrease its prevalence. If all the wild barley were destroyed before ripening seed, there would be much less of it next season. Much of that growing along roads, fences and ditches can be cut and burned. It will be useless to attempt to eradicate it from fields, if that which grows elsewhere is permitted to mature and seed the fields. The heads, as has been stated, break up into short sections that cling to animals, to clothing, or are carried along by wind or irrigating water.



Imported Date, Amreeyeh, Bearing 300 Pounds of Fruit, Arizona Experiment Station.



Foxtail or Wild Barley (*Hordeum murinum*).



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E. J. WICKSON.....Horticultural Editor.

San Francisco, November 9, 1901.

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## The Week.

Delightful autumn weather has followed the showers noted last week, and current exclamation has been of the deliciousness of the air, the beauty of the earth and water. Everything has been calculated to entrance the sound body and the contented mind with the joy of living. Work of all kinds has also been prosecuted with great advantage. The kicker and the croaker certainly have a hard line to follow this year.

While the weather is so fine and able to take care of itself, we desire to remind readers of the excellent work which has been done all through the season of growth and harvest by the officials of the climate and crop service of the Weather Bureau. The results of their patient inquiry have appeared on the page opposite to this in each issue of our journal, and our readers have never been so fully informed on these matters as during the crop year now closing. Mr. McAdie's service was honored recently by the Government by his promotion to professor in charge of the "South Pacific Forecast District." We used to think that the South Pacific was chiefly noted for the cannibal crop, and it is a little jarring to find that we are the South Pacific ourselves. However, it will be easier to stand the shock under Prof. McAdie's ministrations.

Wheat has started upward and outward with much spirit. Futures are stiff and advancing, though spot wheat at this moment can only be reported as firm. Six ships carrying about 10,000 tons of wheat have gone out, and the same amount of barley has also gone to New York and Europe. Barley is also firm for desirable lots. Oats are unchanged except a little improvement in red oats largely for seed purposes. Corn is upset; free arrivals of new corn have unsettled values, though old corn remains scarce and high. Large white beans are firmer, as more are said to be needed to fill obligations. Limas are also firmer. Bran is weak and lower—in fact, all mill-feeds are off, with bran a little farther off than the others. Hay is unchanged and firm for the best, though arrivals are free; supplies are quickly stowed away. Beef and mutton are stationary. Hogs are lower at the East, and there are increased offerings of domestic hogs here. Packers are well supplied and the outlook seems to run downward. Butter is dragging at old prices and weak for all not up to grade. Cheese is holding its own; there is not much mild new cheese in sight. Eggs are at all prices. A few go very high and from that down to cold storage eggs, which are in full supply. Poultry is better on the whole, especially for large full grown fowls. The ar-

ivals from the East are lighter. Potatoes are steady with a fair shipping movement. Onions are slightly higher and in good demand. Fine apples hold up well, but there are many poor ones in sight. Pears are about in the same fix. Grapes are somewhat rain-damaged and berries are scarce. Dried fruits are unchanged, except by a further cut in prunes. New Santa Claras are a shade below 3c and the whole list stands 2½c to a short 3c, according to locality. Almonds are moving well at a slight reduction; walnuts are steady and chestnuts reported lower and weak. New oranges are in fair supply, but still held to be too green in many cases; they sell well if near to ripeness. Honey is steady and hops are weak. Wool is unchanged, with a fair inquiry for sound wools, which are scarce here, and considerable heavy and defective wool waiting its fate.

What the present generation of men is coming to think of agricultural science is seen in the recent experience of those engaged in the forestry work of the General Government. In October, 1898, the United States Department of Agriculture, through its Division of Forestry, first offered to give practical assistance to farmers, lumbermen, and others, in the handling of their forest lands. The response to this offer was immediate, and in three years private owners of over 4,000,000 acres of woodland have availed themselves of the opportunity. In no part of the country is wider interest being shown in conservative forest management by private owners than in the Southern States. Up to date the amount of private lands in the South for which advice in handling has been asked of the Bureau is 1,534,000 acres, and a very large part of the work which will be done by the Bureau for private owners in the immediate future will be in that section. In addition to the work for private owners, the Bureau of Forestry gives technical assistance from time to time in handling nearly 50,000,000 acres of United States forest reserves and State lands. It has its hands full. Not only have the people throughout the country shown interest in practical forestry, but Congress at its last session so far recognized the importance of the Government's work in this line as to raise the Division of Forestry to the rank of a Bureau. The annual appropriation was also increased from \$88,520 in 1900 to \$185,440 in 1901. Still, the demands upon the Bureau continue to greatly outstrip its resources.

Overland shipments of deciduous fruits are showing a better aggregate than was anticipated earlier in the season and the summary holds many points of interest. According to the records of Secretary Maslin, of the Fruit Growers' and Shippers' Association, the total shipments of deciduous fruits and grapes to Nov. 2 is 6135 cars, against 6178 cars to the corresponding date last year. The decrease of forty-three may be wiped out by later shipments. The shipments of fruit to November 1 this season were made up as follows: Cherries, 98½ cars; apricots, 177½; peaches, 1892½; plums, 976; pears, 1529½; grapes, 918½; apples, 481; quinces, 12½; nectarines, 1½; persimmons (Japanese), 2; mixed carloads, 24½. Total, 6114 cars. The Sacramento Bee notes that "comparison with last season's shipments shows a marked decrease in cherries but an increase of about 500 cars in peaches. The decrease in pears is not far short of 600 cars, and there is a gain of about 100 cars in grapes and of about 150 in apples." It seems to us that there must be a large falling off in apricots. With the apricot and the pear crop up to the mark and the other fruits gaining as they ought, it should not be difficult to push this branch of our export products up to ten thousand carloads in the immediate future.

In May of last year the State of California, by the Attorney-General, brought suit against a quarry company operating near Oakland for an injunction against blasting, on the ground that as the neighborhood was largely occupied by chicken ranchers the chicken business would be ruined by the blasting and concussion of the ground attending the loosening of the rocks from the cliffs. Eggs would be added, chickens would be killed by flying rocks and residence in the neighborhood would be rendered unbearable. The issue promised to be an interesting one and likely to settle by actual evidence how far the shock

and tremor of blasting would injure eggs. It is now, unfortunately for science, announced that no such demonstration will be reached. The suit has been settled by mutual agreement. The quarry has been sold and it is supposed that the new owners have now guaranteed that the plant will be operated in such a way that no harm will be done to the eggs and poultry in the neighborhood.

## A Division or Bureau of Irrigation.

During the last year the internal affairs of the United States Department of Agriculture have been much improved by a logical grouping of allied divisions into bureaus, which correlates their work in a very effective way. There has been for years a Bureau of Animal Industry, which has enabled an able and energetic man, Dr. Salmon, to direct and align the efforts of several heads of divisions to the protection and promotion of the splendid industry which is based upon various animal products. A similar main division has recently been created as a Bureau of Plant Industry, under the direction of Dr. B. T. Galloway, who has for many years done excellent service in the Department, and is exceptionally fitted for the greater responsibility which has been placed upon him. These progressive movements naturally suggest that something more systematic and logical should be planned for the irrigation work of the Department.

While there are several separate divisions of the Bureau of Plant Industry, such as the Division of Soils, which has to do with the fundamental features of plant growth, and Divisions of Pomology, Agrostology, of Plant Pathology, etc., which have to do with the main groups of economic plants in health and disease, there is no distinctive division dealing with the use of water in plant growth. This is fundamental, just as the character of the soil is, because the facts of the fertility or sterility of the soil are directly conditioned upon the presence of such amount of water as will enable the plant to use to the best advantage the available plant food. This basic principle of production is now coming to be recognized as not the particular affair of the so-called arid lands but is of the utmost importance, also, in the humid regions of the country. To demonstrate principles and to describe the best practice involving these principles is now seen to concern the whole country and to underlie success in all features of our plant industry. For these reasons it seems to us that, if it is to be within the general grouping of the plant industry, irrigation should have divisional segregation. There seems ample ground, however, for careful discussion as to whether indeed irrigation, as underlying so many phases of rural development, and improvement and as involving so many important economic and legislative matters, should not be given separate standing among the few main divisions of the Department and constitute a Bureau of Irrigation with subdivisions, that each branch may be placed in expert hands and pursued in the most enlightened and practical way toward the realization of the vast benefits which are easily visible and demonstrable. This is a matter which should be carefully examined and discussed by our agricultural and educational organizations and institutions to the end that the best arrangement of the matter may be attained. We undertake to present it in this writing merely in a suggestive and tentative way, content to be guided by further thought and discussion among those who can see most deeply into the problems.

Whatever the conclusion may be the irrigation work of the Department certainly demands greater facilities which shall be distinctively its own. It has prospered hitherto under the wing of the Office of Experiment Stations, but it has no particular fitness for that place, and the Office of Experiment Stations has a constantly expanding field of his own in which it is doing conspicuously good work. We have no doubt that Secretary Wilson will be glad to give careful attention to any propositions which the advocates of the advancement of the theory and practice of irrigation may advance and will make every effort to align them with his own plans for the development of his department of the general government. To this end the subject is commended to the attention of our deliberative agricultural bodies.



QUERIES AND REPLIES.

Weevily Peas.

TO THE EDITOR:—I ordered 1000 pounds of small, white Canadian field peas to plant for green-manuring, making a mistake of one-fourth cent per pound, which I corrected by next mail. In the meantime they shipped me 1000 pounds, a sample of which is enclosed under another cover, saying: "The very best price that we can make on a white, strictly first-class field pea is —, but we happen to have a stock just as good, only a little discolored, so ship you the 1000 pounds." Would you be willing to give me your opinion as to about what proportion of these peas will germinate? What is the best way to plant peas for green-manuring, also for a commercial crop on land where there is no other crop?—A., Tehama county.

The peas of which you send sample are not merely discolored; they are very thoroughly possessed of weevil, almost every pea having been invaded by the larvæ of this insect. They would be well nigh worthless for any purpose except that to which you design to put them. They are, of course, inferior even for seed purposes to good sound peas. Just what percentage will grow will have to be learned by actual germination. The insects are practically all dead. The seed has apparently been subjected to bisulphide or to heat. How far they may be counted upon for germination and strong growth will still be a question. It has been found that weevily peas, while they do not make as good plants as those which are not infested, do in most cases grow and under favorable conditions produce satisfactorily. For green-manuring you have several choices of methods. The cheapest is to sow peas broadcast and plow them in. A better growth is usually had by deeper plowing, sowing and harrowing to cover the seed. Still other growers sow with a drill on well plowed land, cultivate until the plants interfere and then let them go. The latter is the better way when you sow peas for a seed crop.

Green Manure Plants.

TO THE EDITOR:—I would like to sow something adapted for green-manuring in my vineyard this fall. Two years ago I tried red clover, sown in December, but found it was not ready to plow under in March, when required. The soil is a red loam and moist. Do you know of anything that would give better growth, while serving the same purpose, to be sown at any time from this date? I enclose seed of an East Indian dwarf, beanlike plant. The local name (Deccan), kulthi; botanical name, Dolichos biflora. In July last I planted the seed of this in one long row, sown thickly. It is now in flower, a small, delicate, straw-colored pea as to shape, and it is one dense, low mat of growth. The root is a wiry, thin taproot—not at all encouraging in that respect. Would not such a dense mat of green stuff plowed under be of great value to the soil? It has withstood heat and drouth with no care whatever.—ALFRED E. WAY, Fresno.

For the purpose in view you need a hardy winter-growing legume. The reason you failed with red clover lies in the fact that it does not care to grow in valley winter temperatures. It will grow in the spring, when heat increases, but it is then too late to plow in to good advantage. The little bean you send is very interesting, but this, too, will not serve your purpose unless you have moisture enough to allow it to make summer and fall growth. The plant will probably be killed by the frost and cannot be trusted for winter growth. It is well worth trying further to note what summer growth can be had on dry places. It may prove a very valuable forage plant. For green-manuring, the lupins, the vetches and the field pea are most promising. No bean is hardy enough, unless it be the broad bean, which is grown as a horse bean by our Portuguese people. That is quite hardy in the face of moderate frosts. Peas, however, and not beans, are the plants for you to try.

Resistant Vines—Green-Manure Plants.

TO THE EDITOR:—Is the Mission grape in any way more resistant than other varieties? I want to green-manure part of my orchard this season. Is the field pea or clover preferable? If clover, what variety, and what is the best way to plant either?—FARMER, Forestville.

The Mission vine is not resistant at all. Burr clover is the best clover for green-manuring because it makes better winter growth. Sweet clover or melilot makes good winter growth and is commended for green manuring in Arizona. Field peas are most available because you can get the seed cheaply and

in any quantity. If the soil is not too heavy you can broadcast the peas and plow them in rather shallow. Toward spring plow them under with a deeper furrow.

Apple Troubles.

TO THE EDITOR:—I send by this mail samples of Red and White Pearmain apples and one of a Bellefleur. I would like to know the disease of the Pearmains and if the work on the Bellefleur is that of codlin moth?—READER, Lompoc.

The burrow at the eye of the Bellefleur apple does not contain any insect life at present. An insect larva has been there, but we are unable to tell from the debris what its character was. If it was the larva of a codlin moth, it departed altogether from the habit of that insect by not penetrating to the interior. The probability is that it was some other insect. The spots on the Red Pearmain and the discoloration of the flesh within is probably the work of a fungus. It looks much like the so-called Bitter rot, but it does not have the specific character of that fungus. We have seen instances of this trouble occasionally, but have not been able hitherto to make out the character of it definitely. If it is a fungus and enters the fruit from the outside, as seems certain, a spray of Bordeaux mixture, which is used for the ordinary apple scab, ought also to reduce the trouble from this other invader. The use of the Bordeaux is in fact all that we can suggest as a fungicide, and if the trouble occurs in sufficient amount to make it worth while for you to try it, we would like to know very much the effect of such treatment. The application should be made early in the growth of the apple as a preventive recourse.

Salt Bush and White Melilot.

TO THE EDITOR:—The salt bush is becoming quite common on bare spots of an alkaline character in the alfalfa fields. The "clover" specimen is a nuisance, as nothing eats it, and it only grows on the best soil. Should the salt plant, or weed, be encouraged? It does not seem to occupy space that anything else will utilize.—CHESTER D. DUDLEY, Los Banos.

The salt plant is an atriplex: one of the "salt bushes" which are now coming to be widely recognized as valuable on alkali soils. It should certainly be encouraged to cover the alkali spots. It can be fed over by the stock, for it is nutritious, and can be mown with alfalfa, for it will not lower the hay value of that plant. The clover is the Bokhara clover, or white melilot, which we commented freely on in our issue of Oct. 19. It is a bad weed and it has a way of getting into alfalfa fields, much to their detriment.

Oats and Peas.

TO THE EDITOR:—I wish to make some oats and pea hay and would like to know at what time they are to be sown, in what way and which variety, and how oats and peas will do for the silos. The locality where I intend to get this crop is upland bordering the ocean.—SUBSCRIBER, Santa Cruz.

Oats and peas make a good growth for winter feeding green, and they will do for the silo if very firmly and evenly packed down. If not, they are apt to spoil. Black oats are more hardy than white, and, as a rule, less apt to rust if you have hot weather in winter. The best pea is the common, round, smooth field pea. They make better winter growth than the wrinkled peas. Sow the peas and oats broadcast, adding about twenty pounds of peas per acre to the amount of oats you find best in your region, and sow whenever the ground gets moist enough to plow well.

Asparagus Rust Again.

TO THE EDITOR:—Is the Asparagus rust (Puccinia asparagi), which has been so destructive in the Eastern States, now existing in California?—GROWER AND CANNER, Illinois.

To the best of our knowledge, asparagus rust has not yet been detected in this State. We had an inquiry like yours from one of the experiment stations last summer, and made inquiry among growers, but could find no one who had seen the disease in this State. So far as we can be, without special investigation everywhere, we are sure that the trouble is unknown. It has certainly not reached any importance whatever among our commercial growers. If any grower finds anything in the nature of a disease on his plants the coming season, we shall be glad to have specimens for study.

Peach Root Borer.

TO THE EDITOR:—What is the best remedy for the peach root borer? We have tried bisulphide of carbon, but it does no good, and to dig out the grubs twice a year and not get more than half of them at that is very expensive.—READER, San Jose.

We should like to know ourselves what is the latest approved recourse with this pest. Perhaps some helpful San Jose reader will give us the conclusions of the last season's work. All the old remedies have been fully discussed in our columns. Will some one bring the discussion up to date?

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending November 4, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

The temperature has been nearly normal, and no rain has fallen since the first of the week, except on the northwest coast. Beans on high ground were not materially damaged by the rain of last week, but the crop on the low lands was seriously injured. Hay was slightly damaged, but grain was mostly under cover. New grass has made rapid growth, and in some places is high enough for grazing. Hay baling continues in some sections. Sugar beets are yielding a good crop in San Benito county. There is a short crop of potatoes in Sonoma county. Heavy dews have been very beneficial to vegetation. Plowing and seeding are progressing. A correspondent at Campbell estimates that the prune crop for this season is not more than one-fourth that of last year.

SACRAMENTO VALLEY.

Nearly normal temperature has prevailed during the week, and conditions have been favorable for early-sown grain, pasturage and citrus fruits. Grain is making rapid growth and green feed is plentiful. The rain of last week caused no damage. Plowing and seeding are in progress. Orchardists are pruning. Grapes and deciduous fruits are all gathered. Oranges have ripened rapidly and heavy shipments have been made; there will be a large crop, superior in quality. Olive picking is progressing.

SAN JOAQUIN VALLEY.

The weather has been generally warm and clear, with cool nights and heavy dews. Raisins are nearly all cured and under cover; there was very little damage done by the rain of last week. All other fruits, except a few wine grapes, are gathered, and the last crop of grapes will soon be disposed of. Oranges are ripening rapidly, and shipments have commenced; there will be a good yield, excellent in quality. Early sown grain, alfalfa and pasturage were greatly benefited by the rain. In some sections the farmers have burned off the stubble, while others have plowed it under. Plowing and seeding are progressing favorably. Cattle are in good condition.

SOUTHERN CALIFORNIA.

Generally fair weather has prevailed during the week, with foggy nights and mornings along the coast. The rain of last week did not injure the bean crop as much as then estimated, as it was followed by warm, clear weather. Bean threshing is progressing rapidly, and will be completed in about two weeks, if the weather continues favorable. No other crops were injured by the rain, and orchards and pasturage were greatly benefited. Plowing has commenced in some places. Oranges are ripening rapidly. The yield of hardshell walnuts will be light.

LOS ANGELES SUMMARY.—Rain was followed by fair, warm days and cool nights; the effect is shown in the coloring of oranges. The rain put ground in fine condition. Plowing and seeding have begun. The rain was equal to irrigation in most orchards.

EUREKA SUMMARY.—Harvesting of potatoes nearly completed; yield generally light. Ground is in good condition for plowing; some land has been seeded to oats. Pasturage is excellent.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, November 6, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week...	Minimum Temperature for the Week...
Eureka.....	.04	6.78	7.55	5.32	58	40
Red Bluff.....	.00	3.90	3.65	1.55	82	46
Sacramento.....	.00	1.90	1.82	1.81	76	46
San Francisco.....	.00	1.42	1.95	2.06	76	50
Fresno.....	.00	1.13	.49	1.56	80	48
Independence.....	.03	1.07	.84	1.71	74	44
San Luis Obispo.....	.00	2.86	1.93	2.20	86	44
Los Angeles.....	.00	2.00	.26	1.07	86	48
San Diego.....	.00	.34	.30	.66	80	52
Yuma.....	.00	.22	.02	1.04	86	48



## HORTICULTURE.

### Frost Fighting in Orchard and Vineyard.

In answer to a question last week we cited the coal basket method as widely approved by experience. A fuller account of what may be expected of this method in the way of cost and duration of fire when these baskets are compared with pots of crude oil is given by a committee appointed by Ontario and Cucamonga citrus fruit growers to consider methods of protection against damage by frost.

The first work of the committee was a test of coal baskets and oil pots made at the grove of Mr. H. Little. In that test no effort was made to ascertain what change in temperature was effected, the question with the committee being whether oil could be burned without damage through smutting the fruit. The basket used was that ordinarily used, made by Mr. Copley of Riverside, and the oil pot the manufacture of Mr. Froude of Covina. The claim of Mr. Froude is that by burning some kind of waste in the pot to serve as a wick there is not nearly so much smut from the oil, and by putting a cover on the pot a considerable part of the smut can be collected. The oil pots used could not be burned without a wick, as they had holes for draft 2 or 3 inches from the bottom. Some had draft holes at the top to allow burning more readily if a cover were put on.

The committee reported to a meeting held September 10 as follows: Two coal baskets containing ten pounds of coal, six oil pots with wick and one four-pound brick of eucalyptus cuttings and crude oil were burned. The oil pots were massed so as to furnish the best possible chance for smutting the fruit and trees. Fresh oil was poured into several of the pots after they had burned for a time to increase the smut. The coal was quite readily lit by pouring a little coal oil upon the kindling, but the oil lit most readily. Ten pounds of coal burned about four hours, though quite a heat was given off for some time after that. Two gallons of oil burned about the same length of time, but the heat was done when the oil burned out. The eucalyptus brick burned out too rapidly to be of practical use.

As nearly as we could get figures as to the cost, they are as follows: Coal baskets, 7½ to 8 cents; ten pounds of coal 5 cents; kindling, estimated; oil pots, three gallons, 25 to 30 cents; wick, if use sacks, 3 cents; oil, 3 cents per gallon. The cost seems to be in favor of the coal basket.

For readiness of lighting the pots were preferred; as to heat given off, opinions differed.

Regarding smut from oil pots: A partial covering of the pots caught a considerable portion of the smut, but the pots could not be burned wholly covered, as the holes at the top did not give sufficient draft. In the opinion of the committee the holes are useless, as they allow the escape of the oil, if there be more than the wick absorbs, and they are not needed for draft. Some smut was found on the leaves the next morning, but a slight wind removed all traces of it. There was, nevertheless, a slight fear in the minds of the committee that if oil were generally used it might result in damage.

AT POMONA AND RIVERSIDE.—Acting on this report by the meeting, Mr. J. W. Freeman was appointed to visit Pomona and Riverside and get what information he could regarding the use of oil. Acting on these instructions, Mr. Freeman visited those places and reported at a meeting held on Tuesday, September 24. Mr. Newerf of Pomona prefers coal baskets. He thinks they give a steadier heat and there is no danger of smut. He uses one to four trees. His trees are close. Has raised the temperature 6°. Mr. Meecham of Riverside is depending on running hot water over his place, and thinks he has an ideal plan for frost protection. He has, however, up to this time used oil, and found no material damage from smut. He burns ten four-gallon pots of oil to the acre, without wicks. He burns the oil in a six-gallon pot. Thinks he could use more pots to the acre with good results. Mr. Holmes has used oil, but prefers coal on account of the liability of oil to smut. Masses his baskets somewhat to take advantage of the wind currents. Thinks this very important. Mr. Twogood uses coal baskets, one to the acre.

All of these gentlemen put stress upon the value of co-operation in making the work effective and lessening the expense. They also agree upon the value of keeping the ground wet during the period of danger from frost.

THE DECISIONS.—After discussing the report for a time the meeting voted in favor of the use of coal baskets as being cheaper and in no danger of smutting the fruit. Some, however, expressed their intention of combining the methods in order to test the matter more thoroughly, putting possibly a row of large oil pots across the north end of the lot to make a draft of warm air downward.

It was deemed very important that orders for baskets, pots and coal be in at once, so that everything be in readiness when needed. It was thought that nothing could be done regarding kindling, but that each could best furnish his own.

The committee recommend at least forty baskets

to the acre. No plan for information or temperature has been adopted, but something in that way should be done before the frost season comes on.

### Bees and Pear Blight.

The issue in Kings county over the return of the bees to the spread of pear blight is attracting attention of fruit growers everywhere. Clarence Wedge, of Albert Lea, Minn., in a communication to the Farmer, notes the fact that Mr. M. B. Waite, of the Department Agriculture, holds that bees and wasps are largely responsible for the spread of pear blight. His theory is that the disease is inoculated through the blossom or through the tender ends of rapidly growing shoots or through abrasions of the bark. Mr. Wedge adds: We have repeated evidence that blight might be inoculated through the blossom, having grown the pear to bearing age several times with scarcely a show of blight, only to have them go all to pieces as soon as they blossomed. We have also frequently noted that all varieties of apple that are inclined to blight will be affected more seriously in the bearing or blossoming years and that many trees, like the pear, will scarcely blight at all until they begin to blossom.

Mr. Waite has found the germs of pear blight, and by covering a portion of the blossoms with netting and noting that none of the spurs so covered were blighted, although exposed to any spores that might be floating in the air, he demonstrates to a reasonable degree that the distribution of the disease was by insects rather than by the wind.

THE BEE KEEPERS' SIDE.—Gleanings in Bee Culture gives the following paragraphs: Regarding the bee and pear blight question in central California, I am pleased to announce that many of the fruit growers are coming to (or appear to be coming to) the conviction that the removal of the bees during the time the trees are in bloom will not materially abate the destructive effects of pear blight virus. It appears that the resolution passed by the bee keepers in their convention, to move the bees out of the region of the pear orchards during the time they were in bloom, required some ratifying action on the part of the fruit men in filling out certain blanks. These blanks were before them some time ago, but nothing has been done. It is probably true that the pear orchardists are not very sanguine as to the beneficial effects of the proposed removal, and many of them are fair men, and therefore disinclined to put the bee keepers to this unnecessary expense.

I talked with Prof. Waite (who, it will be remembered, originally declared the bees to be guilty) while in Buffalo, regarding this case. He was not sure the removal of the bees would bring about relief, owing to the presence of wild bees and numerous other insects that would, undoubtedly, spread the disease. He was sure, from extended experiments, that the bees were very necessary for the fertilization and proper maturing of the fruit, although he admitted that possibly conditions in California might be different. Prof. Waite, is a careful, candid man, and a friend of the bees, and so much so that he deems it necessary to have a few colonies of them in his own pear orchard, pear blight or no pear blight.

Taking everything into consideration, it appears now there will be no conflicting of interests between the bee keepers and pear men; and it is hoped that the matter will rectify itself when the pear blight disease loses its hold or "runs out," as we sincerely hope it may.

## THE FIELD.

### A Tomato Contrast.

A. B. C. writes for the Corning Era an entertaining account of how to grow tomatoes without getting a crop. He says that under the direction of an able and experienced horticulturist several of the Maywood colonists clubbed together and planted quite a large area to tomatoes. The land was prepared in good shape and the planting well done. Being in the State of California they then dropped the matter, apparently contented to "let nature take her course" while they spent their nights and Sundays figuring how they would be able to spend the money that would soon begin to flow in on them without any further exertion of their own.

HOW THE CHINAMAN DOES IT.—Now, a Chinaman (whom we, as a matter of course, figure as of an inferior race), when he wants to raise things goes to them and sees what they are in need of, and he is mighty apt to give those things just what they are calling for, and in large and bulky doses. He may look like a graven image, and apparently have as lively an imagination as a cast-iron pillar, but he doesn't raise his products by inhaling large amounts of climate and letting the products hustle for their own sustenance. No, he gets out with his hoe, and

his manure, and his water supply, and he never quits until he has got all out of the ground that it will give.

HOW THEY CAME OUT.—As we have said, our white men let "nature take her course," which she naturally did, and because the tomatoes were planted somewhat late and had no water, they were slow coming. So our planters set up the usual howl that the land was poor; climate not adapted to tomatoes; sunburned them; blossoms fell; and a period of weeping and weeping followed, in which no thought or attention was given the vines. And while our friends were "chewing the rag" with a knot in the end, with their eyes raised to heaven, when they should have been on the vines, a few quiet and industrious Chinamen, looking as innocent and free from guile as a new-born lamb, were silently scooping in the tomatoes as fast as they ripened and getting good money on delivery at the cannery. The neighbors also drove in as their necessities required and hauled off what they thought they might need, for the flip of the ground squirrel's tail indicated a hard winter ahead if they didn't lay in plenty of tomatoes. The school children also found it a "good thing," and filled themselves and their buckets on general principles.

Finally some indiscreet individual called our friends' attention to the fact that, in spite of the lack of care given their venture, they were liable to have uncared tons of tomatoes, and they are now looking for a small boy to take charge of the matter and make proper disposition of the output. Now, the small boy will no doubt gather in a number of tomatoes and chase them into the cannery, if he doesn't pelt them at rabbits and things; and the investors will no doubt realize possibly a tenth of what they would if proper care had been given the planting. In other words, if they had done what a Chinaman knew had to be done, they would have had good returns.

THE CHINAMAN AGAIN.—A certain Chinaman was induced by the superintendent of the cannery to plant five acres to tomatoes. From those five acres he has sold to the cannery over fifty tons of first-class tomatoes, at \$10 per ton, and at this writing he is still hauling them in. Now, what could have been done on a 100-acre patch had white men given the care and attention to their business that this Chinaman knew his business had to have? This sleepy-eyed Celestial seems to be personally acquainted with each individual plant in his patch, and to know about the day and hour he can depend on it to ripen its fruit. And he is carrying away in some unknown part of that garment of his which passes for his "pants" the good dollars that ought to be going into a white man's pocket. But the white man, even with the advice and under the direction of the able and experienced horticulturist, failed to show up the stuff. Hence these tears.

Mr. Atkins, the cannery superintendent, has worn the skin off his tongue in spots and along the edges urging the people to raise tomatoes and other vegetables. He will pack all he can get, and has orders for 10,000 cans if he can get them. The market is here for every box of tomatoes that can be raised, and we still have faith in our belief that an American, under favorable conditions, is as able and smart as a Chinaman.

### The Potato Worm.

TO THE EDITOR:—In your issue of Sept. 1, 1900, you answered an inquiry in regard to worms in potatoes. My crop was at the time affected, as I suppose, in the same way. The worms are so small that I have not seen them; but the brown appearance, showing their passage into and through the potato, shows in a large portion of the crop. People here call it "black rot," but the potato does not rot—it retains its condition until spring. Fearing injury this year, I planted in early spring, to get the crop disposed of before it was attacked by the moth. But a late frost killed the tops when 4 inches high; so that my crop was late, and it is more seriously injured than it was last year. Bliss' Red Triumph is least affected, on account, as I think, of the tops being small and dying down as soon as the crop is mature, and because the tubers grow deeper in the ground than other sorts. Maule's Commercial—my finest and most productive potato—is injured worst of all. I wish to ask: 1. Is it likely that this pest will remain with us? 2. Whether the worms remain in the potato until spring, so that they would go with seed taken to a new locality? 3. Does the moth that lays the eggs feed on the potato tops, so that they could be poisoned with Paris green?

Standish, Lassen county.

THOMAS JONES.

There will soon appear from the University Experiment Station at Berkeley a bulletin giving a full account of this very destructive insect. The potato which is least affected with you escapes because the tubers are so low in the soil that the moth cannot reach them to deposit eggs. The other potatoes can be helped by hilling up loose soil about the stems, to keep the tubers from exposure. This pest will remain with you and must be constantly fought, as the forthcoming bulletin will show. The insect can be carried in infested potatoes, because the moth breeds in confinement in sacks. The moth does not feed on



anything to speak of. The worms are sometimes in the stems, but Paris green treatment would reach very few, indeed. Protection of the tuber is the proper recourse, and that we shall fully explain in an early issue.

#### Rye Grass in the Stockton Region.

We have so often commended the Australian and Italian rye grasses for the Stockton region that we are pleased to find in the Independent these statements: As a sample of what can be obtained from rye grass, it has been reported to the Chamber of Commerce that at the Riverside dairy eighty-seven head of cows have been pastured for months on thirteen acres of rye grass, and they could no more than keep it down. At the Riverside dairy nine cows to the acre are being pastured and the stock is doing splendidly. John W. Dougherty of Terminus has five or six acres of rye grass on which he pastures his sheep, cows and horses, and all are kept sleek and fat. He considers it the best kind of feed. Rye grass grows best on sediment land that is too wet for alfalfa. As it grows it forms a heavy sod, similar to that formed by blue grass, and, no matter how wet the soil may be, this sod is so heavy that stock do not break through it or trample it into mud.

In the dairy interests, which are growing so rapidly in San Joaquin county, rye grass is destined to play a prominent part. A large acreage has been planted on several of the farms, where stock will be pastured and used for dairy purposes. Two large companies on the islands have taken up the cultivation of rye grass for that cause, and the owners are well pleased with the result.

### THE IRRIGATOR.

#### Electric Pumping for Live Stock and Irrigation.

From a paper by LEWIS A. HICKS, C. E., at the San Jose convention of the Pacific Coast Electric Transmission Association.

At the present time electric power may be said to have invaded every field in which pumping finds application, so that the only limitation imposed upon its use is that of relative economy, measured in dollars, which any given combination of apparatus can attain as compared with some alternative device actuated by power other than electricity. Practically every condition ordinarily met in pumping work has been covered in the application of electric power to the numerous pumping machines in use in California, through ropes, belts, gears and direct couplings, and while the disclosures of the Watt meter as to the power consumption of many common types of pumps are embarrassing to their makers, the accurate knowledge now available to manufacturers and engineers of economical results attained by their designs is of the greatest value as a factor in securing better workmanship and more efficient pumps. It is the purpose of this paper to sketch briefly the more important uses of electric power in this connection in California, and to make some comparative statements as to efficiency of performance.

**FEED AND CIRCULATING PUMPS.**—The element of greater convenience and small unit size often result in the use of steam or air, more especially when the work is isolated, notwithstanding the well-known superior economy of almost any form of power pumps, belt driven. All the advantages ordinarily lost in this way inhere in the electrically driven power pump, however connected, and it is much more satisfactory to carry current to an isolated motor than to pipe steam to the same point. The difficulty of operating power pumps is thus eliminated and shafting dispensed with.

The matter of variation in the volume of delivery can be arranged in a number of reliable methods to be entirely automatic in action, and a little mechanical ingenuity will overcome apparent difficulties and result in the electric service being made the most satisfactory attainable, both in efficiency and reliability, and when our auxiliaries are operated in this manner, the net economy of all kinds of mechanical plants will be greatly improved.

**USE OF STOCK PUMPS.**—Throughout the central portions of the San Joaquin valley the plane of saturation is within 40 or 60 feet of the surface; and in many places where the land is in use for cattle raising, the only resource for drinking water for cattle is the use of stock wells equipped with single-acting brass cylinder pumps, the rods being attached to one end of a walking beam operated from a horse-power sweep. On one of the large ranches in Kern county there are over fifty such pumping stations, each provided with an attendant, usually a superannuated old man, a mule and a shack for both. When the wells can be located within a reasonable distance of each other, the attendant may operate several wells, but his duties are usually limited to keeping the mule in motion enough of the time to maintain the water troughs full at one station.

The fifty wells are scattered over a territory about 12 miles in length and 6 miles wide; and although the wages paid are merely nominal, the aggregate an-

nual outlay for wages, repairs and horse feed amounts to more than \$15,000. It fell to the writer to investigate the possibility of effecting a saving in this direction, and, after considering the relative merits of electric distribution with separate motors and pumps for each point, and of separate gas engine installations, he concluded that the cheaper and most reliable service would be secured by installing electrically driven air compressors at a central point, connected to all the wells with screw pipe. The air at each point was designed to be controlled by floats in the water troughs, operating pneumatic relays, consisting of a simple piston valve, capable of such adjustment as to maintain practically a constant depth of water in the troughs. The height of lift, small amount of power required at each point, and freedom from working parts to get out of order, recommended the Poehle air lift for this service, and a full-size plant was set up in the shop for testing purposes under like conditions to the actual ones and worked very satisfactorily. The expense of operation of the entire plant, costing \$40,000, was estimated to be about one-third of the then annual expense for men and mules, and this figure covered operating expense, interest on new investment and renewals. Initial pressures were determined from the consideration of the required terminal pressure at the well farthest removed from the compressor, together with the economical pressure loss, cost of pipe and power considered. Pipe diameters, leading to wells nearer the compressor on branch lines, were cut down, to use up, as far as possible, the surplus pressure, and where this was impossible, owing to proximity to mains, reducing valves were to be used. Compressors were to be in duplicate, belted to induction motors, and provided with positive valves, actuated by Corliss gear and arranged to cut off the compression of air automatically, as the load decreased by 25% decrements. The distribution required the use of 45 miles of iron pipe, and the sharp advance of this material two years ago to more than double its previous cost prevented the proposed construction.

August J. Bowie, Jr., has since reported on the same problem, and under changed conditions as to cost of materials, recommends separate electric motors with a double reduction of speed through belt and gears to the crosshead operating stock pump now in use, and provided with a steam generating reserve in case of accidents, resulting in even temporary shut down of the water-generated current; this precaution being necessary, because the cutting off of the drinking water supply from large herds of valuable cattle during the intense summer heat results in serious loss. The operation of the pumps is to be controlled from floats in the water troughs, and the entire plan has been developed with much ingenuity to make available the existing pumps and wells. The resulting operating expenses would be about the same as for the pneumatic system, the saving effected in either case being sufficient to reimburse the owners for the entire investment within four years. The combined efficiencies possible of attainment in such installations would appear ridiculously small, but that power applications can be made with great financial advantage in many locations ordinarily considered outside the proper field for such work, is well illustrated by the case in point.

**DEEP WELL PUMPS.**—A satisfactory head for deep-well pumps is a much sought for device and attempts to meet the want may be found in a dozen different designs, involving special arrangements of gears or cams, to translate rotary into reciprocating motion suitable for single and double acting deep-well and cylinder pumps. Electric applications have been made to all of these types, and the possibilities of even so insignificant an amount as 3000 gallons per hour for irrigation of fruit and vegetables need to be seen to be appreciated. Good economy can be secured by using such pumps properly set and connected, even on a very small scale.

**PUMPING FOR IRRIGATION.**—The statistics of the development of subterranean waters in this State during the past three years by means of pumps shows a most remarkable growth, which has been fostered largely by the contemporaneous electric developments from the water power of the Sierras. In the southern part of the State the high prices of citrus lands and prevailing scarcity of water has accustomed people to paying for it at rates only possible because of the great value of the products raised. Four cents per inch per hour appears to be less than an average charge and ten and twelve cents is not unusual. Under these circumstances, there is not the same stimulus to obtain high efficiency that exists where water is cheap.

Where water is 70 or 80 feet below the surface and pit pumps are used, attendants, if not properly trained, are apt to permit the whole place to become dirty and greasy, and, when this is so, it is safe to say that the oiling devices are imperfect, shafting is out of line, boxes are hot, trouble is more or less continuous and much power is being wasted against hard packing and other useless friction loss. In contrast, the air lift, with nothing accessible underground, shines as a model of convenience for the attendants, and in the minds of some of the irrigators with whom the writer has talked this consideration seemed to

outweigh the loss incidental to the use of single stage air compression with plant efficiencies of 20% to 25%.

When, as in southern California, crops are entirely dependent on artificial water supply and are immensely valuable, the attention of the land owner is fixed on the possession of water at any cost, and the unit price becomes a matter of minor importance in the aggregate returns. Steam, gas and crude oil engines, in a variety of designs, compete with electric motors in driving air compressors, deep-well pump heads and rotary pumps of the Root type. At the present time not less than 45,000,000 gallons per day are being pumped from the Gravel Cone of San Antonio canyon, in the vicinity of Pomona, with a lift approximating 75 feet.

The power conditions may be understood from consideration of what should be attained in any properly designed installation under such conditions. In a recent test made by the writer on about the same lift, a performance of 200,000 foot-gallons per kilowatt hour was secured. Allowing for friction in delivery pipes, this would mean 200,000-85x540- 4.3 miner's inches per kilowatt hour, or a revenue of 17 cents per kilowatt hour of exerted energy.

At Riverside hundreds of acres of sidehill lands, formerly above irrigating supplies, have been brought under cultivation by pumps with lifts ranging as high as 100 feet, and throughout the southern part of the State well water development has more than offset the decreasing perennial supply.

In the San Joaquin valley conditions are much more rigorous, as the comparative abundance of gravity water and smaller crop values have fixed a lower unit price for irrigating water. Lifts, as a rule, are not so high perhaps by half, but this does not commence to overcome the discrepancy in prevailing water rates, which are as low as 1 cent per inch per day, and probably average 3 cents per inch per day. Under the most favorable circumstances the cost of pumping may drop as low as 3 cents per inch per day, but to attain such economy is impossible in any other way than with cheap electric power.

The Lindsay Development Co., of Lindsay, irrigating 1800 acres of orange lands, has recently installed a 50 H. P. centrifugal plant manufactured under the writer's supervision, which, on the basis of a flat power rate, from the Mount Whitney Power Co., of \$50 per horse-power year and continuous operation, delivers water against a total lift of 69 feet for 3½ cents per inch per day.

This plant, consisting of a horizontal shaft centrifugal pump, direct coupled to 50 H. P. 2000-volt induction motor on common cast iron base, is set in a movable wooden frame, capable of being raised and lowered to follow the changes in the plane of saturation. Under test, it developed a combined plant efficiency of 64%, without allowances of any character, and a pump efficiency of 72%—the best record ever encountered in the writer's practice. The runner is of the enclosed type, with outside vanes to assist in minimizing side friction, vacuum parts near the nozzle tips, and practically no clearance in the shell. Readings from indicating watt meters on both legs of the two-phase current were checked by volt and ammeters, and again with time readings from an integrating polyphase watt meter. Gauges were tested and checked against each other at different elevations. The plant discharges into a 15-inch pipe line, which delivers water at different elevations to the individual stockholders. A gate valve is provided at the pump house on the main discharge, so that constant pressure and discharge can be maintained at any one of the discharge openings, or the flow may be by-passed to a weir and direct measurement made of the flow at any delivery point by regulating the pressure, as shown by gauge, to agree with the pressure indicated when actual delivery is being made. This plant shows an economy of 202,000 foot-gallons per kilowatt hour, and represents the best attainment of centrifugal pumps within the knowledge of the writer, and offers a cheerful contrast to the performance of an air compressor plant in southern California, working at the same lift driven by Corliss compound engines, burning oil under tubular boilers, with economizer, feed-water heater, surface-condenser and first-class equipment throughout, which realizes a comparative economy of 83,000-foot gallons per kilowatt hour.

There are exceptional plants, however, where the economy of the best centrifugal pumps is exceeded. The Hermosa plant of the Chase Nursery Co., at Riverside, Cal., realizes an economy of 215,000 foot-gallons per kilowatt hour, and consists of a 20 H. P. motor belted to a rotary pump, which takes water from a small gravity ditch and rises it 100 feet through 1300 feet of 8-inch pipe.

A centrifugal pump installed at the same point in competition only realized 133,000 foot-gallons per kilowatt hour. It frequently happens that the point of best efficiency of a centrifugal does not coincide with the conditions under which it is required to operate, and the case quoted of a constant water supply and lift is an illustration of the necessity of expert consideration in planning and installing such machinery, if economical results are to be attained.

At Exeter a pumping plant has been installed for the irrigation of a tract of orange land, requiring the delivery of water at a height of 500 feet. An induction motor belts to a countershaft, from which two



vertical triplex single-acting pumps are driven.

A horizontal triplex, single-acting pump is also in use in the Kaweah district, belted in the same way, the plungers working in an oil bath in a closed shell. No exact data as to the economic performance of these pumps is available; but, from comparison with other pumps of the same type, it is probable that they are good for 200,000 foot-gallons per kilowatt hour.

Another type of irrigating pump consists of screw runners, mounted from 5 to 10 feet apart on a vertical shaft centered in the well casing, in which it is inserted by spring steel guides which carry babbitted bearings in which the shaft rotates. The weight of the water column and rotating parts is carried on a piston rotating with the shaft and subjected to static pressure, or upon ball bearings.

Accurate tests by the writer under exceptionally favorable conditions of this class of pumps show a performance of 88,000 foot-gallons per kilowatt hour when electrically driven, and this result was checked against indicator cards from a steam engine substituted for the motor, and showed substantial agreement.

In general, the performance of the several types, so far as they have fallen under the writer's observation, may be compared as follows:

Per Kilowatt Hour.	
Air Lifts.....	65,000 to 85,000 foot-gallons.
Propeller Pumps.....	85,000 to 100,000 foot-gallons.
Deep Well Pumps.....	100,000 to 175,000 foot-gallons.
Centrifugals.....	125,000 to 200,000 foot-gallons.
Rotary Pressure.....	210,000 to 215,000 foot-gallons.
Triplex.....	200,000 to 225,000 foot-gallons.

Each type has a useful place to which it is adapted, and the best results can only be secured by careful consideration of the conditions peculiar to each installation and an accurate comparative knowledge of the apparatus available for the purpose in hand.

## FRUIT MARKETING.

### The Olive Crop.

We recently noted the meeting of olive growers in Los Angeles. A fuller account of the transactions is given in the Los Angeles Herald. General dissatis-

faction among the olive producers of southern California on account of the low prices offered for the crop this year, found expression Thursday afternoon in a meeting of nearly all the prominent growers of this section.

**THE SITUATION.**—The meeting was held in the offices of the Los Angeles Olive Growers' Association, in the Bradbury building. C. A. Washburn was elected chairman and H. Sturdevant secretary. The chairman, in stating the situation, said:

"There are in the region between Santa Barbara and Riverside about 3000 acres of bearing olive trees. About 60% of the year's crop is seeking an outlet. The present price which growers are receiving lies between \$30 and \$40 a ton, depending on whether they are pickle or oil olives. There is nothing in olives at that price. You all know it to be a fact that \$30 a ton for olives does not even pay a low rate of interest on the investment. Now what shall we do about it?"

**WAYS AND MEANS.**—A general discussion of ways and means followed. I. W. Lord advocated agitation looking toward proper legislation to protect the olive growers against the encroachments of cotton oil adulteration. George Arnold, secretary of the Los Angeles Association, observed that a carload of cottonseed oil had just reached Los Angeles, and he had no doubt it would soon be masquerading under a pure olive oil label. He thought the first move of self-protection should be the appointment of a committee to work for the permanent organization of southern California growers, looking toward the ultimate union of all growers in the State.

A large number of attending olive growers had not yet sold their crop, and these wanted a plan adopted that would bring them something more than pay for their labor.

**ORGANIZATION.**—B. R. Sprague, a representative of the northern olive growers, recommended that all those having olives for sale pool their crop and place the sale in the hands of a committee. The olive growers were not quite prepared for this decisive action. They finally agreed, however, that the chair appoint two committees—one on permanent organization and another on temporary relief. The first consists of Chairman A. R. Sprague, Los Angeles; R. F. Billings, Corona; J. R. White, Riverside, and

Mr. Meserve, Los Angeles. The committee on temporary relief is made up of George Arnold, chairman; I. W. Lord, Cucamonga; H. M. Jameson, Corona. The latter committee will meet at once, as the situation is urgent.

In order to ameliorate the pressing need, Mr. Arnold suggested that those growers who are unwilling to sell their crop to the mills at the present price, dry their fruit and have it ground at a reasonable price at the mills of the Los Angeles Growers' Association, a course that would place them in a position to hold the finished product for better prices.

The sentiment of those present was, of course, opposed to the adulteration of olive oil by means of cottonseed oil, and it is probable that when the Fruit Growers' Convention meets in December in San Francisco the olive growers will take steps toward securing legislative protection against the fraud.

There were represented at the meeting about 2000 of the 3000 acres in southern California, exclusive of the acreage in San Diego county.

### Canker Worms Again.

**TO THE EDITOR:**—Do you endorse the article, "Latest About Canker Worms," in PACIFIC RURAL PRESS of Oct. 26, 1901? I have understood from various articles that the duration of the moth season was from about Dec. 15 to Feb. 15.—H. D. PEET, Madrone.

**TO THE EDITOR:**—There is an error in the printed article referred to. It should read "end of December" instead of "second of December." We find, as I stated in the article, that the moth appears according to season. If we have good early rains to soften the soil, the moth will appear earlier and quit early; but, on the other hand, if the rains don't come till December, then we have a late brood, and this will sometimes last till the middle of January. You will see that it is difficult to state the exact time, but the average is between Nov. 15 and Dec. 31. In the 1895-96 report of the State Board of Horticulture, page 58, it gives "from the beginning of November until the end of December." Last year the first moths appeared on Dec. 7, and this year, owing to the early showers, I advised putting on the traps early. It remains with the grower to study the conditions of his own district. EDW. M. EHRHORN, San Jose. County Entomologist.

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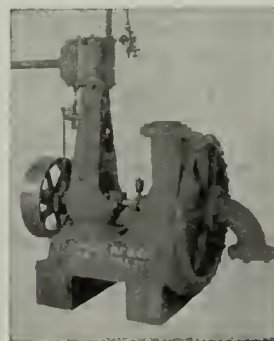
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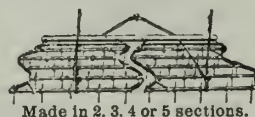
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## Agricultural Review.

### BUTTE.

**AN ORCHARDIST'S EXPERIMENT.**—Red Bluff News: O. W. Thresher, near Gridley, has had the tops of some Bartlett pear trees grafted into Winter Nelis and other winter varieties. He expects that when the young shoots blossom they will pollinize the Bartlett bloom and secure the setting of a crop of the latter kind. He has purchased a large number of bees to aid in the pollinizing. Mr. Thresher has also grafted apricot trees into Sugar prune and looks for a crop next year.

### COLUSA.

**HOGS BETTER THAN WHEAT.**—Colusa Herald: Fred Farnsworth has just sold a fine lot of hogs to George Showler. There were ninety-four hogs in the band and they averaged about 220 pounds. They sold at \$5.30 a hundred, making about \$1100 for the whole band. That's a great deal better than raising wheat and selling it at 80 cents a hundred.

### EL DORADO.

**SHIPPING APPLES TO MEXICO.**—El Dorado Republican: Mention was made in this paper last week that W. A. Hartwick had shipped twenty-five boxes of apples to Old Mexico. On Monday of this week he shipped by express twenty-five more boxes to Remolino & Echwarria of Mexico City. The apples are of a hardy variety and very smooth, and only the best ones are shipped. Mr. Hartwick gets \$1.50 per box for the apples here and the express charges to Mexico City will be about \$3 per box, or \$75 for the twenty-five boxes. A. J. Lowry sent a half dozen of these apples down to Mexico as a sample. That is how the people down there found out that there are such fine apples grown here.

### GLENN.

**SOME PRIZE PEARS.**—Orland Register: Chris Jasper, who lives a few miles southeast of Orland, brought into town some pears, nearly all of which weighed one pound each. Mr. Jasper had one limb from the tree which contained forty-four large pears. The limb was small, measuring less than  $\frac{1}{2}$  inch in diameter and not more than 2 feet long.

### LOS ANGELES.

**ORANGE GROVE WORTH \$1000 AN ACRE.**—Pasadena Star: That orange groves in the vicinity of Pasadena are all right is evidenced by a recent purchase. George S. Keep of Alhambra sells to a Riverside orange grower, for \$10,000, a ten-acre tract of land adjoining the Bally place, near Alhambra. It is set out in Washington Navel orange trees, which are in a fine state of bearing, and yield an income which gives a fair rate of interest on the price for the property.

### MONTEREY.

**CATTLE FROM TEXAS.**—Salinas Index: Hon. J. D. Carr received Wednesday from Texas a trainload of 500 cattle of the Hereford stock. They were in three divisions—yearlings, two-year-olds and three-year-olds. The stock stood the trip well and will be placed on the Gabilan ranch, where grazing is good. There were three stops made along the road and the cattle unloaded and given twenty-four hours to feed, drink and rest.

### ORANGE.

**BEATS THE RECORD.**—Anaheim Gazette: Uncle Jake Everhart says beets which were caught out in the rain show signs of taking a second growth, which, if continued, will destroy their saccharine qualities. He had nine acres unharvested at the time of the recent rain, but is plowing them out at a lively rate. From three acres of one of his patches west of town he will harvest between ninety-four and ninety-six tons. This beats the record.

**PEANUT VINES FOR CATTLE.**—Santa Ana Correspondence Los Angeles Times: It is not generally known, but peanut vines are extensively used as fodder for

cattle in this county. There is no county in the State that grows so many peanuts as this, and the little village of Tustin is the center of the industry. It has only recently been ascertained here that the vine of the peanut is not only greatly relished by the average cow, but that it is a good milk producer. All the vines are now cared for, while in the years past they were left upon the ground to rot. At the present time there is not a large market for the fodder, for many farmers have not yet learned of its nutritious character. It can be bought in the field for \$1.50 a ton, and it is claimed that one ton of it is equal in nitrogenous matter to a ton of alfalfa hay.

### SAN JOAQUIN.

**PROFITS FROM AN ORCHARD.**—Stockton Mail: It is reported from Lodi that \$60,000 worth of fruit from one of the 600-acre orchards in the Langford Colony was sold this season. The total cost of picking, cultivating, packing and marketing the fruit was \$20,000, leaving a net gain of \$40,000. The orchard consists principally of peaches, plums, apricots, almonds and table grapes. From sixteen acres of irrigated Tokays were shipped 4100 crates to the Eastern markets. The vines are six years old. From twelve acres of irrigated peaches 182 tons were picked and sold to the cannery, and not a single peach was less than  $2\frac{1}{2}$  inches in diameter. Three hundred and fifty trees on an unirrigated part of the orchard did not average over a box to the tree and were inferior in size, while sixteen boxes (or 800 pounds) were picked from one tree on the irrigated twelve acres. The total output of peaches to the cannery was 800 tons, while 600 tons were dried.

**GOOD RETURNS FROM WINE GRAPES.**—Lodi Sentinel: J. Bishofberger, residing west of Lodi, holds the record so far this season for raising wine grapes. Although slightly frost-bitten, his seven-acre vineyard has brought him \$840 this year.

### SAN LUIS OBISPO.

**DAMAGE TO BEAN CROP.**—San Luis Obispo Tribune: It is learned that the recent rain damaged the beans in the valleys to some extent, while on the uplands the damage will amount to practically nothing. On the low land in the valleys the water so thoroughly saturated the soil that the moisture arising damages the beans, no matter how many times they are turned.

### SAN MATEO.

**SOME BIG POTATOES.**—Niles Herald: "Uncle" Perry Morrison came over from his ranch at Long Bridge, near Hall Moon Bay, Tuesday, and brought four specimen potatoes. Two potatoes were 12 inches, one 13 inches and one 13 $\frac{1}{2}$  inches in length, and all but one of the 12-inch were 10 inches in circumference, and that was 8 $\frac{1}{2}$  inches. The potatoes were of the Salinas Burbank variety and were remarkably smooth and regular, except that the two largest each had a side growth of a potato as big as one's fist. One of these made a hearty meal for four persons.

### SANTA BARBARA.

**RAIN DID LESS DAMAGE THAN REPORTED.**—Santa Barbara Press: Outside reports continue to come in with speculation regarding the damage to beans done by the rain. P. C. Higgins reports from the Carpinteria valley that if no more rain falls the damage will be slight, probably 5% of the crop. Lowering weather will undo them. From Goleta about the same report comes, with the exception that beans in sacks have begun to sprout on the under side where they have been piled in large shocks and were wet through.

### SANTA CLARA.

**CARLOAD OF HAY BURNED ON TRACK.**—San Jose Mercury, Nov. 3: A carload of first class wheat hay was burned on the track in front of the broad gauge depot about 3:30 o'clock yesterday afternoon. The car on which the hay was loaded was part of a freight train from the south. The train was standing still and a spark from the smokestack of a passing engine fell in the hay, and it was only a few minutes before the whole load was ablaze. A still alarm of fire was turned in. Before the fire department arrived the switch engine had drawn all the other cars away from the burning hay. A strong stream of water was turned upon the flames, which completely enveloped the whole load. Several trains were delayed for a short time by the hose upon the tracks from the fire engine. There were nine tons of hay on the car. What was not burned was damaged by water so that it will be unfit for use. The hay was from Soledad. There was no insurance.

### SANTA CRUZ.

**LARGER MARKET WANTED FOR BELLEFLEUR APPLES.**—Watsonville Pajaronian: M. N. Lettunich & Co. made

a sale of Bellefleurs at Liverpool last week for 7s 6d per box, or about 90c per box in Watsonville. Another lot, from another firm, sold in England last week for about bare cost. The prices which have been realized in England this year do not justify further shipments of that variety to Great Britain. There is a strong need of expansion of markets for Pajaro Bellefleurs. The territory in which they are now sold is too limited to warrant an increase in planting of this variety, and it is in order to widen the field for them. Our Bellefleurs do not sell in the country south of the Ohio river and east of the Mississippi river below St. Louis, and the trade for them is very light east of Cincinnati. The big end of the Bellefleur crop is sold west of the Missouri river.

### SOLANO.

**GOOD WAY TO TREAT ALFALFA HAY.**—Dixon Tribune: L. S. Hyde of Tremont states that, in the treatment of fresh alfalfa hay, he makes a practice of putting a layer of well-cured oat hay in the barn, and on top of this a layer of freshly cut alfalfa. In this way he fills the barn. The green alfalfa cures nicely and flavors the oat hay perfectly, thus causing stock to eat it all up clean.

### SONOMA.

**HOP YIELD AND PRICES.**—Santa Rosa Press-Democrat: The highest price paid so far for this season's crop of hops in Sonoma county has been 11 $\frac{1}{2}$  cents a pound. The majority of hop sales this season have been in the neighborhood of 11 cents, while a few sales have been recorded at a lower figure. It is said if it were not for the fact that some of the hop merchants early in the season sold short to brewers at low prices, hops would now be commanding 12 $\frac{1}{2}$  @ 15c. Sonoma county's yield this season aggregates 15,500 bales. The sales already made, together with the contract hops, amounts to 6200 bales, leaving unsold about 9300 bales.

**ANNUAL WOOL SALE.**—Cloverdale Reveille: The wool sale passed off very quietly, there being a very small attendance of growers. The prices paid varied from 10 $\frac{1}{2}$  to 12 cents, the latter figure being the highest price paid, and one-half cent higher than the highest price paid last fall. Messrs. Brush and Pinschower, the local buyers, and C. C. Farmer of Santa Rosa were the heaviest purchasers.

### STANISLAUS.

**PROFITABLE COWS.**—Modesto Herald: Joseph McNeil received \$8.57 from the Ceres Creamery for the milk product of a Jersey cow during September, and A. O. Grant received an average of \$7.77 $\frac{1}{2}$  for the milk of each of four cows for the same month—\$31.10 for the milk of the four. Manager Whitmore says the patrons of the creamery are realizing an average of about \$5 per cow. The daily receipts of milk aggregate in excess of 1300 pounds.

### SUTTER.

**DIGGING OUT APRICOT TREES.**—Sutter Independent: A number of the orchardists in the Stewart tract have commenced digging out their apricot trees and will plant in their place peaches. They claim that the 'cot trees in that locality will not bear more than one crop in four years. This, of course, does not pay for the ground room, hence they are replacing these roots with more profitable trees.

### TEHAMA.

**BEEF YIELD NOT SATISFACTORY.**—Redding Free Press: C. O. Dodge, who

Rain and sweat have no effect on harness treated with Eureka Harness Oil. It resists the damp, keeps the leather soft and pliable. Stitches do not break. No rough surface to chafe and cut. The harness not only keeps looking like new, but wears twice as long by the use of Eureka Harness Oil.



Sold everywhere in cans— all sizes. Made by Standard Oil Company

has been foreman of the great beet harvest on the Fennell tract above Corning, gives some interesting facts regarding the first real experiment with sugar beets on a large scale in northern California. Fifteen thousand acres have yielded 112,500 tons, or about seven and one-half tons to the acre. The showing is hardly satisfactory, and it is claimed would have gone from nine to fourteen tons to the acre but for mistakes in sowing and caring for the crop by men not sufficiently experienced.

### VENTURA.

**CROPS DAMAGED BY RAIN.**—Ventura Independent: The recent rain registered 3.10 inches here. The damage to beans is considerable and is variously estimated at from 10% to 20%. Only about a third of the crop had been harvested when the showers began. The fruit was almost all in, but slight damage to the walnut crop may result. Since the weather has turned off warm and bright the most care is being exercised in making the loss as light as possible. If fair weather continues for two or three weeks farmers will then be ready for winter.

**BEGINNING EARLY.**—Santa Paula Chronicle: The Oxnard sugar factory expects to make a six months' campaign next season. To this end contracts will be made for the growing of 250,000 tons of beets, planting to commence in December, and the factory to begin grinding next June; 250,000 tons of beets will mean a million and a quarter of dollars to the farmers of Ventura county, besides a half million to the factory workmen.

### YUBA.

**OLIVES SMALL THIS YEAR.**—Sutter Independent: E. E. Munger, who recently visited the olive region near Smartsville and Brown's Valley, says much of this season's fruit will be too small to pickle at a profit. He was unable to assign any reason for this condition, but says he will not handle any olives this year, unless he can get better sizes than he saw in the orchards already visited.

**HORSES FOR CHICKEN FEED.**—Wheatland Four Corners: Two men have been in Wheatland the past week or two gathering up all old and decrepit horses which have outlived their usefulness, and which are delivered to a Petaluma firm as chicken feed. The animals are killed at the slaughter house and their flesh and bone are ground up and fed to chickens. Some few cook the meat before feeding it. The hides are disposed of to tanners and bring from \$3 to \$4 each. A number of animals were secured in this section, the price being paid, on an average, about \$2.50 per head. They bring from \$8 to \$10 a head at Petaluma.

**FINE SWEET POTATOES.**—Marysville Democrat: Albert Williams of Rackerby this season raised some very fine sweet potatoes. He has two varieties, white and red in color. He has quite a field of them and is at present digging and marketing the product. Some of the potatoes weigh four and a half pounds and they are of fine quality, sweet and mealy.

**OLIVES LARGE BUT CROP SMALL.**—Yuba City Independent: A number of growers who have been interviewed on the subject, state that as a rule the olives are much larger this season than they were last, but that the crop is lighter. John Morrison, of the Colmena Colony, says his crop will be 50% lighter than last year, but that the fruit is larger. A lady in Palermo makes the same statement as to her olives. At the Olive Hill Colony the crop is lighter but the fruit is larger than in former years. H. C. Clark of this place thinks this year's crop will fall short in quantity of that of former years at least 50%, but that the fruit being larger, prices will run from 5% to 10% higher.

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**...KENDALL'S SPAVIN CURE...** the old reliable remedy for Spavins, Ringbones, Splints, Curbs, etc., and all forms of Lameness.



It is the most successful remedy ever discovered, as it is certain in its effects and cures without a blemish, as it does not blister.

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Goff, Kan., Feb. 7th, 1900. Dr. B. J. Kendall Co. Gentlemen:—I have used your Kendall's Spavin Cure ever since I can remember, about 20 years, and it is all you recommend for it.

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DR. B. J. KENDALL CO., Enosburg Falls, Vt.



## THE HOME CIRCLE.

### Since We Got the Mortgage Paid.

We've done a lot of scrimpin' an' a-livin' hand-to-mouth,  
We've dreaded too wet weather an' we've worried over drouth,  
For the thing kept drawin' int'rest, whether crops were good or bad,  
An', raisin' much or little, seemed it swallowed all we had.  
The women folks were savin', an' there ain't a bit of doubt  
But that things they really needed lots of times they done without.  
So we're breathin' somewhat easy, an' we're feelin' less afraid  
Of Providence's workin's, since we got the mortgage paid.

I wish I'd kept a record of the things that mortgage ate,  
In principal an' int'rest, from beginnin' down to date—  
A hundred dozen chickens, likely fowl with yellow legs,  
A thousand pounds of butter an' twelve hundred dozen eggs,  
Some four or five good wheat crops, an' at least one crop of corn,  
An' oats, an' rye—it swallowed in its lifetime, sure's you're born,  
Besides the work an' worry, ere its appetite was stayed.  
So we're feelin' more contented, since we got the mortgage paid.

We've reached the point, I reckon, where we've got a right to rest,  
An' loaf around, an' visit, wear our go-to-meetin' best—  
Neglectin' nothin' urgent, understand, about the place,  
But simply slowin' down a bit, and restin' in the race.  
In time I'll get the windmill I've been wantin', I suppose;  
The girls can have their organ, an' we'll all wear better clothes.  
For we've always pulled together, while we saved an' scrimped an' prayed,  
An' it seems there's more to work for since we got the mortgage paid.

—Roy Farrell Greene.

### A Postponed Wooing.

"You don't realize what it means to me," he said.

She turned impatiently to the window; the wide, sloping roof of the Leipzig Conservatoire was visible in the distance, and her lips parted and closed in a firm compression.

In the pause he paced restlessly round the room.

It lacked the usual bareness of students' quarters in a German pension; pictures, photographs, and nicknacks adorned the wall, easy chairs supplemented those of an uneasy cane variety, door and window were curtained with terra cotta tapestry, and a square of the same material draped the grand piano jutting from a corner almost into the center of the room. A well-stocked music canterbury stood at the side, with a bowl of white hyacinths on the top, and the perfume mingled with a fragrance already in the atmosphere—a faint, indescribable exhalation of luxury and refinement, somehow identified with the individuality of the tenant, Margaret Trentham.

His eyes were drawn toward her irresistibly, and kindled in unwilling admiration of the imperious poise of head and shoulder, and patrician beauty of features outlined in profile against the pale twilight of an April day. But the mouth had the downward curve at the corners denoting willfulness, and her eyes, meeting his, flashed defiance and reproach as she echoed his words tentatively.

"You don't realize what it means to me, Mr. Northbrook. This is my last term here, and the concert to-morrow my only opportunity of playing publicly in the Conservatoire. My people are coming from America specially, and it will be absurd if I don't play after all. Besides, you have taken the solos so many times before—"

"But the circumstances are exceptional," he urged. "I would not have asked you otherwise. It happens that Prof. Meyerhaus is in Leipzig recruiting violinists for his European tour, and it occurred to me that perhaps he would include me in his orchestra as solo pianist—"

"You could surely play to him at his hotel," she interrupted.

"Yes, if I could secure a hearing, but he was engaged each time that I called, and when I wrote he replied curtly that it is his custom to engage star artistes for the solo instrument in concertos."

A gleam of sympathy showed in her face.

"I'm sorry," she said, impulsively, "but in that case I can't see what difference it will make if you play to-morrow."

"The professor will be present," he rejoined eagerly. "He accompanies one of our directors, who has promised to put in a word for me. If I do myself justice there is a chance that Meyerhaus changes his mind. By engaging me he would save the huge fees demanded by musicians who have made a name, and for me—a pause gave additional weight to his words—"it means, possibly, the opening of a career. I should come before the public at once, and without expense, instead of returning to America to drudge at teaching, because I do not possess the means to make an imposing debut, and poverty-stricken pianists are so numerous—"

He checked himself suddenly, embarrassed that his eagerness had led him to confide in a comparative stranger. Desperate, uncertain hope still animated his sharp-featured face—an interesting face, dogged determination lined in the square set jaw, and intellect and musical ability in the broad, high forehead; prominent eyebrows overhung wistful brown eyes, radiated at the moment with the fervor of egotistical longing.

She watched him in curious silence. He was the crack player of the Conservatoire, a mere youth of twenty, unpopular among the students owing to an unsocial disposition, all the warmth and frankness of his nature being congealed into chilling reserve by the shrinking, defiant pride of poverty.

Her own expression betrayed fitful indecision, involuntary sympathy battling with her unwillingness to sacrifice.

"But you forget," she said slowly, in self-vindication. "I have rehearsed with the orchestra throughout the term, and the conductor will not approve of a change at the last moment."

"I have already obtained his permission," he began—

"Then if he is willing for you to play, why does he allow the decision to rest with me?" she broke in, angrily.

"Because he cannot make a change for personal reasons, but, if one pianist declines to appear, he can substitute another."

A large cosmopolitan audience filled the Conservatoire concert hall for the final concert of the season.

The pianist waited her cue in studious calm, though her eyes roved from time to time to the auditorium, where in the stalls, beside a Conservatoire director, was seated the white-haired, white-mustached impresario, whose orchestra had taken Europe by storm on his previous tour.

The force of association drew her glance upward again to the balcony, to the man directly opposite, gazing before him in dreary preoccupation, the sharpness of his features accentuated in the reflection of light from the platform, the lips seeming parted in voiceless expostulation and appeal—

"You don't realize what it means to me."

Her expression gradually clouded, the mouth trembled in glowing agitation.

The baton beat on steadily, three—four—

"One!"

No answering chord from the pianist; the conductor glared at her aghast, the orchestra in undisguised surprise; she started slightly, and the color flamed into her cheeks.

The baton swooped down again.

"One! Fraulein!" The conductor leaned forward half frantic—"Have you forgotten?" he hissed.

A soft, level voice prompted suddenly from the balcony.

"The allegro movement—key A flat minor—extended chord—"

She glanced swiftly upward, with a little impulsive gesture, and rose in her

seat, faced the conductor, flashing a glance of swift defiance, and passed, with head erect, through rows of thunderstruck musicians to the platform exit.

Bewildered comments were exchanged throughout the hall, the notability in the stalls adjusted his glasses rather irritably, and awaited developments.

"These Americans, these Americans!" chafed the conductor, beside himself with rage; then he hurled an order at the doorkeeper, pointing to the balcony.

"Herr Northbrook—fetch him, immediately."

The man at the end had already disappeared, and in the passage connecting the platform with the cloakrooms, he encountered the retiring pianist.

"Quick!" she whispered, "the conductor called for you."

His face glowed with trembling, exultant gratitude, he seized her hand, and started backward conscience-stricken, as a tear fell glistening on her sleeve.

"Herr Northbrook!"

The stentorian voice of the doorkeeper rang down the passage, and she darted through a doorway.

Her companion followed, stooped a second, and his lips seared her cheek.

In the next the platform door closed behind him.

An echo reached her of the allegro—rippling, lightening, swirling across the keys, subdued at intervals to the tumult of orchestral accompaniment, then ringing again, triumphant, quivering at the last with the rapt, exalted passion of a love song—followed by the silence that is greater than applause.

The pianist himself broke the spell, rising from his seat; the hall shook with a burst of enthusiasm, but he passed unheeding through the platform exit.

Shout after shout followed him, but only when he found the artistes' room empty he returned, scanned eagerly and fruitlessly balcony, area and stalls.

The conductor beckoned him nearer, shook hands effusively and motioned significantly toward the clamoring, excited audience.

He faced them slowly, his powerful hands hanging limply at his sides; the renewed applause seemed only to daze him; he bowed once or twice, half heartedly, and disappeared.

The white-haired notability removed his glasses with a sigh of satisfied enjoyment, and turned to his colleague, his rugged Teutonic features softening into a smile.

"Your American young ladies—do they often take stage fright? But her compatriot, he is magnificent! to play that most difficult concerto without notes, without rehearsal—touch, technique, perfect! Consider also his youth."

Twilight in Central Park, the sharp, gray twilight of late autumn silhouetting threadbare clumps of trees against patches of opalescent cloud; below the leaves drifted russet-hewed along the grass, and whirled in the carriageway amid the horses' feet.

A dog cart joined the stream of homeward-bound vehicles, with a thoroughbred bay between the shafts being driven by a lady. Her features were only partially visible above the high collar of her coat, but an involuntary exclamation broke from a man pacing aimlessly along the gravel walk.

"Miss Trentham!"

"Mr. Northbrook!"

With the answering cry of recognition she reined in, and guided the bay to the curb.

Half hesitating, Northbrook went forward.

A long, loose ulster flapped about his angular figure; he jerked off his hat, and fingered the brim nervously, until she bent and held out her hand, her face flushing with pleasure as she spoke.

"So you are back in America, Mr. Northbrook!"

"Yes." He muttered the monosyllable without raising his eyes.

A longer pause ensued; he twisted a button on his coat abstractedly; when

she spoke again her voice had a shy, hesitating ring.

"I need scarcely ask if you are successful?"

He produced a memorandum and read out some details; no trace of pleasure or enthusiasm in his tone; only a cynical sort of triumph in the sense of achievement.

"To-morrow is my final appearance in New York with Professor Meyerhaus for the present. I am booked subsequently for various musical receptions, and a command appearance before royalty, also the leading concert agents have made flattering offers."

He stopped, and laughed sarcastically, casting a sidelong glance at her.

"Shall I congratulate you?" she asked slowly.

"If you had congratulated me that night at the Conservatoire," he broke out, resentfully, "and given me the opportunity to thank you—"

"You could not expect me to wait—face every one after my failure. Besides" (she turned away her eyes to hide a sudden confusion) "you—you—had already thanked me."

It was not only to thank you—he was confused now, struggling with increasing desire to make his hopeless avowal.

"I owe my subsequent success to you," he continued, pedantically.

She bent impulsively, with a radiant, triumphant smile; her voice swayed with a little tremor of delight.

"I think I understand—but you are mistaken—for all you know—the unattainable—may be within reach."—Chicago Tribune.

### Opportunity.

This I beheld or dreamed it in a dream:  
There spread a cloud of dust along a plain;

And underneath the cloud or in it raged  
A furious battle, and men yelled, and

swords  
Shocked upon swords and shields. A

prince's banner  
Wavered, then staggered backward,

hemmed by foes.  
A craven hung along the battle's edge,

And thought, "Had I sword of keener steel—"

That blue blade that the king's son bears  
—but this

Blunt thing!" He snapt and flung it  
from his hand,

And, lowering, crept away and left the field.

Then came the king's son, wounded, sore  
beated,

And weaponless, and saw the broken sword,

Hilt-buried in the dry and trodden sand,  
And ran and snatched it, and with battle

shout  
Lifted afresh he hewed his enemy down,  
And saved a great cause that heroic day.

—E. R. Sill.

### Roosevelt's Temperament.

Whatever apprehensions concerning his course which at any time even his friends may have cherished have all arisen from the possession of a temperament one of the most phenomenal existing among the public men of modern times. From this temperament come a physical and mental energy and a power of endurance most remarkable. If he were noted merely for abounding physical courage, impetuosity, love of conflict, mental alertness and ability, tremendous industry in administrative work, and for political success, he would still be a striking figure in public life. But the interesting and important thing about Theodore Roosevelt is that he puts all the resources of this extraordinary temperament—all his chivalric bravery and exhaustless energy—at the service of high political ideals. In the still active ranks of statesmen he was among the first to see that the full and frank adoption of the merit system is an absolute requisite of good government. He fought valiantly for this system when he was a member of the national Civil Service Commission; he put civil service reform into practice when president of the New York Police Board; and as Governor of New York he saw to it that the Legislature should enact the best State laws on the subject in vogue in all the States of the Union.—The Century for November.



## DOMESTIC ECONOMY.

## Home-Made Apple Butter.

Care should be taken in the selection of apples for making the cider which is to be used later in apple butter. When sweet apple butter is wanted, good sweet apples, well matured, should be carefully selected from which the cider is to be made. The cider should not be allowed to stand and work, but should be boiled down as soon as possible after being brought from the mill. A large copper kettle can be used to best advantage on the farm. It should be hung on a large pole in the usual way and the cider should be boiled down as rapidly as possible. It should be skimmed from time to time, as the residue rises to the top. A barrel should be boiled down about one-fourth. In other words, a barrel containing 50 gallons should be reduced by boiling to 12 gallons. Care should be taken so as not to allow the blaze to run up the sides of the kettle, as it is liable to make the cider bitter. The cider should be carefully stored in crocks or jars, and the kettle should be thoroughly cleansed, if not used the same day.

Several bushels of good quality sweet apples should be selected, pared and quartered. Two bushels of quartered apples are required for one barrel of cider, that is about 12 gallons when boiled down. About one-half bushel of quartered apples should be placed in a kettle, a little cider poured over them and cooked until they can be mashed through a colander. Treat the others in the same manner and place all together with the cider in a large kettle, cook slowly and stir constantly. With a constant heat it should be cooked until the cider will not separate from the apples. In this condition it is jelly-like. It can be tested from time to time by taking a spoonful and allowing it to drip in a saucer or other vessel. When in this jelly-like condition, remove the kettle from the fire and stir in one-fourth pound ground cinnamon. After mixing and stirring 5 to 10 minutes the apple butter is ready for jars, crocks or cans. It should be dipped out and placed in the vessels and allowed to cool. Care should be taken not to break the crust that forms on the top after cooling. If it is not broken, apple butter, properly made, will keep for years in this condition by simply tying a cloth or paper over the top of the jar or can.

Stirring apple butter in large quantities a special stirring device is necessary. It consists of a piece of well-seasoned wood through which several holes are bored at the base. To the bottom is fastened a braided brush of clean corn husks. With a handle from 8 to 10 feet long the apple butter can be stirred constantly, so that the bottom will not burn or stick in the least. It must be borne in mind that a great deal depends upon the stirring process. If this is faithfully and properly done and the other directions are followed, a good product will result.

**SOUR APPLE BUTTER.**—Where sweet cider is not available or where sour cider is preferred, one barrel should be boiled down to one-quarter. When about half boiled down, a half bushel of quartered apples of good quality should be added and stirred constantly. This should be boiled for an hour or so, when another half bushel should be added and stirred in the same manner. As soon as this is reduced so as to admit another bushel, they should be added, cooked and stirred until the same jelly-like condition is obtained as described above.

When done about twenty pounds of granulated sugar and one-fourth pound ground cinnamon should be added and thoroughly stirred from ten to fifteen minutes. The fire should then be removed and the butter put in jars at once. When cool, cover as described above. Apple butter of any kind should not be allowed to stand in brass or copper kettles after it is done. The kettle should be thoroughly cleansed and scalded. Made according to these directions, apple butter will be smooth, jelly-like and will keep for a few years,

if kept in a moderately cool cellar or pantry. As a tart, dessert or spread for bread, nothing is more palatable or delicious than home-made apple butter.—Mrs. W. H. Johnson in Orange Judd Farmer.

## Domestic Hints.

**ALMOND PASTE.**—Mix a pound of almond meal with a pound of castor sugar, the stiffly beaten whites of three eggs and a little almond flavoring. Remove the hard paste while hot from the cake, dust it with flour, and press the almond paste over the cake, making it into a good shape. Smooth it with a knife, and dry it slightly in the oven.

**TOMATO CATSUP.**—Scald, peel, slice and core a peck of ripe tomatoes. Use the bright red tomatoes. Place in a porcelain kettle, and cook until tender, and then strain. To this quantity of tomatoes add three large onions chopped very fine, one tablespoonful of salt, one teaspoonful of cayenne pepper, five tablespoonfuls of ground mustard and a tablespoonful each of ground black pepper, ground cloves and celery seed in a bag. Simmer about six hours.

**CREAMED POTATOES.**—Chop cold boiled potatoes fine; to each pint allow half a pint of cream sauce made by rubbing together a tablespoonful of flour and one of butter; add half a pint of cold milk, stir until boiling, add a teaspoonful of salt and a dash of pepper and mix this with the potatoes. Turn the potatoes into small individual dishes or into a large dish; cover the top with finely chopped cheese, then press the cheese down into the potatoes. Bake until a golden brown.

**STEAMED LITTLE NECKS.**—Scrub the shells of the clams well in water; put them in a saucepan without any water; place over the fire and cook until the shells open. Remove the clams with a skimmer, pour the liquor into a jar and let it settle. Strain the liquor through a piece of linen. Remove the clams from the shells, pulling off the thin skin around the edge and cutting off the whole of the black end with fish shears. Plunge each clam into a small quantity of the liquor and when the water has settled pour it into a saucepan; add the clams and scald, but do not allow the water to boil. Take out the clams and serve with brown bread and butter or on buttered toast.

**CHICKEN CROQUETTES.**—Boil one large chicken until it slips from the bones readily, and grind in a meat grinder; also grind one-half can of mushrooms. Boil in salted water twenty minutes one pair of sweetbreads, throw into cold water for a few minutes, remove skin and little pipes and grind. Put in one and one-quarter pints of milk on the fire and let it come to a boil. Add to that, while still on the fire, the inside of one-half loaf of bread, and stir thoroughly. Then add chicken, mushrooms, sweetbreads, two eggs well beaten, a piece of butter the size of a duck's egg, melted; a dash of parsley and red pepper, and salt to taste. After all is well mixed pour in a flat dish; then beat two more eggs and spread, not beat in, all over the dish. Mould any shape, roll in cracker meal and fry.

**OKRA SOUP.**—Cut into slices a quarter of a pound of pork, put it in a frying pan, fry gently for a few minutes, and add a sliced onion and one quart of green okra pods cut into small pieces. Put the lid on and fry the okras for thirty minutes. In the meantime cut the meat from a cold roast fowl, place the bones in a saucepan with a quart of water, and boil. Squeeze out all the pork fat from the okras and onions and place these in the saucepan with the bones. Put three tablespoonfuls of flour in the pan with the pork fat, and when it is a rich brown add it to the bones in the saucepan; cover over the pot and simmer gently for three hours. Strain through a fine sieve into another saucepan, pour in two quarts of stock and add the fowl meat cut in pieces, and salt and pepper to taste. Simmer gently for twenty minutes, turn the whole into a tureen and place in the refrigerator to get cold.

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# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Nov. 6, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	70 1/4 @ 70 3/4	73 3/4 @ 74 1/4
Thursday.....	70 3/4 @ 70 3/4	73 3/4 @ 74 1/4
Friday.....	70 3/4 @ 70 3/4	74 1/4 @ 73 3/4
Saturday.....	70 3/4 @ 70 3/4	73 3/4 @ 74 1/4
Monday.....	70 3/4 @ 71 1/4	74 1/4 @ 74 3/4
Tuesday.....	71 1/4 @ 72 1/4	74 3/4 @ 75 1/4

### CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	36 1/2 @ 36 3/4	38 1/4 @ 39
Thursday.....	36 3/4 @ 37 1/4	38 3/4 @ 39 1/4
Friday.....	37 @ 36 3/4	39 1/4 @ 38 3/4
Saturday.....	36 3/4 @ 37	38 3/4 @ 39
Monday.....	36 3/4 @ 37 1/4	39 1/4 @ 39 3/4
Tuesday.....	37 1/4 @ 37 3/4	39 3/4 @ 39 3/4

### SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	99 1/4 @ 99 3/4	—
Friday.....	99 3/4 @ 99 3/4	1 04 1/2 @ 1 03 3/4
Saturday.....	99 3/4 @ —	—
Monday.....	1 00 1/2 @ 1 00 3/4	1 04 1/2 @ 1 04 3/4
Tuesday.....	1 01 @ 1 01 1/4	—
Wednesday.....	1 01 @ 1 00 3/4	1 05 1/2 @ 1 04 3/4

### WHEAT.

The market for this cereal has not been noteworthy for either activity or firmness since last review. The attempt to work up a boom on account of alleged damage to the crop in Argentina collapsed in its incipency, and gave evidence at the very start of being worked in the interest of manipulators in the speculative market. Considerable wheat is going aboard ship at this port, but it is mainly out of stocks which exporters have been carrying for some weeks. Shippers are not as a rule in pressing need of wheat, but at same time are watching for opportunities to purchase to advantage, aiming to steadily have enough in readiness for ships arriving under charter. Most of the deep-sea ships coming in have been previously engaged for the grain carrying trade, and latest charters have been at rather low figures, as compared with ocean freight rates lately current. For iron ships carrying wheat cargo to Cork or Queenstown for orders, usual option as to final destination, £1, 12s 6d is now about the utmost figure warranted as a quotation, and there have been some recent charters down to £1, 11s 3d. The spot market closed moderately firm but quiet.

California Milling.....	1 01 1/4 @ 1 05
Cal. No. 1 shipping, alongside.....	98 3/4 @ —
Oregon Valley.....	98 3/4 @ 1 01 1/4
Washington Blue Stem.....	1 00 @ 1 05
Washington Club.....	97 1/4 @ 1 00
Or qualities wheat.....	92 3/4 @ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s 3d @ 6s 4 1/2 d	5s 10 1/2 d @ 5s 11 d
Freight rates.....	4 1/2 % @ 4 3/4 %	3 1/4 % @ 3 1/2 %
Local market.....	93 3/4 @ 96 1/4	97 1/4 @ 1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, 99 1/2 @ \$1.01 1/2.  
May, 1902, delivery, \$1.03 1/2 @ \$1.05 1/2.  
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.01 @ \$1.00 3/4; May, 1902, \$1.05 1/2 @ \$1.04 1/2.

### FLOUR.

Business is of moderate proportions and at generally unchanged values, although the market cannot be termed firm. Supplies are of fair volume and are sufficient to accommodate a larger trade than exists. Spot stocks during the next few months are more apt to show increase than reduction.

Superfine, lower grades.....	22 25 @ 24 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

### BARLEY.

Considering the difficulty experienced during part of the season in getting ships loaded, the outward movement of barley makes a very good showing. Exports since July 1st aggregate over 120,000 tons, which is nearly double the quantity for corresponding time last season, and is slightly ahead of the record made in barley shipments two years ago. Values for

both brewing and feed descriptions have continued much the same as last quoted, with market moderately firm at prevailing rates, especially for round lots desirable for export. In the speculative market there was little done. In fact, trading in barley options throughout the current season up to date has been very light.

Feed, No. 1 to choice.....	72 1/2 @ 75
Feed, fair to good.....	70 @ 72 1/2
Brewing, No. 1 to choice.....	75 @ 82 1/2
Chevalier, No. 1 to choice.....	97 1/4 @ 1 02 1/2
Chevalier, poor to fair.....	75 @ 90

### OATS.

Buyers are not taking hold very freely at full current rates, and find it difficult to secure material concessions in their favor. Inquiry has been lately largely for Red oats, and this variety is likely to continue popular as a feed oat. Choice seed oats are in fair request, commanding top quotations, or occasionally, in a small way, a little more.

White Oats, fancy feed.....	1 25 @ 1 30
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 17 1/2
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 22 1/2 @ 1 27 1/2
Black Russian.....	95 @ 1 20
Red.....	1 00 @ 1 22 1/2

### CORN.

Most of the corn offering is new crop, and is mainly too damp to be desirable, causing market for same to be weak and unsettled. Old corn is scarce, and market for choice old is quite firm, some Large White being held up to \$1.70.

Large White, good to choice.....	1 40 @ 1 50
Large Yellow.....	1 20 @ 1 30
Small Yellow.....	1 25 @ 1 35

### BEANS.

The market is showing unsettled condition, as is to be expected in the early part of the season, with new crop arriving rather freely, especially as prices the past season have been on a tolerably high plane. The rainstorm of about a fortnight ago has been a further factor in unsettling values, as some damage was done to the crop in process of being threshed. For choice beans the tendency has been to more firmness, while for rain damaged or otherwise faulty stock the market inclined against sellers. The outward movement lately has been mainly in Lady Washingtons and Limas. In the line of colored beans there has been considerable doing in Bayos and Pinks, although offerings of latter variety were rather heavy and market for same lacked firmness.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	3 00 @ 3 25
Lady Washington.....	2 50 @ 2 70
Pinks.....	1 95 @ 2 20
Bayos, good to choice.....	2 40 @ 2 65
Reds.....	3 00 @ 3 25
Red Kidney.....	3 00 @ 3 50
Limas, good to choice.....	4 65 @ 4 75
Black-eye Beans.....	3 00 @ 3 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

### DRIED PEAS.

Market for Green Peas continues inactive and weak, with millers and jobbers all well stocked, and sales from first hands are consequently difficult to effect. Niles Peas are in moderate request at previously quoted range.

Green Peas, California.....	1 25 @ 1 75
Niles Peas.....	1 50 @ 1 60

### WOOL.

Little doing in this center, and market is likely to prove quiet during the balance of the season, as the most desirable wools are nearly all out of first hands. Very heavy and seriously defective wools are receiving little or no attention, and where a buyer is found for such stock, low figures have to be accepted. The quotable range of values for all grades remains nominally as previously noted.

### SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

### FALL.

Humboldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 11
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 1/2 @ 8 1/2
San Joaquin Lambs.....	7 1/4 @ 9

### HOPS.

No improvement to note in the situation, the wholesale market being slow and lacking in strength. Where transfers are effected from first hands, it is only at comparatively low figures, bids above 10c. for round lots offering from first hands being the exception and are confined almost wholly to exceptionally desirable qualities. About 100 bales went forward the past week via British Columbia steamer for Australia.

Good to choice, 1901 crop.....	10 @ 13
--------------------------------	---------

### HAY AND STRAW.

The same healthy tone previously noted as existing for all hay of good to choice quality continues to be experienced. Prospects are that prices for desirable stock will not be any lower later on, and may harden, particularly if there is any material increase in supplies of rain damaged hay. Low grade hay is fairly steady at the figures quoted; that prices for this sort will change much for the better later on is not probable.

Wheat, good to choice.....	9 00 @ 12 50
Wheat and Oat.....	8 50 @ 11 50
Oat.....	6 50 @ 9 50
Barley and Oat.....	6 00 @ 8 50
Barley.....	5 50 @ 8 00
Alfalfa.....	8 00 @ 10 00
Clover.....	6 00 @ 8 00
Stock.....	5 00 @ 6 00
Compressed.....	8 00 @ 12 00
Straw, 3 bale.....	35 @ 47 1/2

### MILLSTUFFS.

Bran is lower, with stocks and offerings on the increase. That the present figures will be long maintained is not likely. Market for the whole line of mill offal shows weakness. Rolled Barley was steadily held. Milled Corn was unsettled, tending downward.

Bran, 3 ton.....	18 00 @ 19 00
Middlings.....	20 00 @ 21 00
Shorts, Oregon.....	19 00 @ 20 00
Barley, Rolled.....	16 50 @ 17 00
Cornmeal.....	31 00 @ 32 00
Cracked Corn.....	32 00 @ 33 00

### SEEDS.

Mustard Seed is moving outward at tolerably steady values. Shipments for the week include 12,076 lbs. via Panama steamer for New York. In prices for other seeds quoted herewith there are no changes to record, but the movement cannot be termed active.

	Per ctt.
Flax.....	2 65 @ 3 25
Mustard, Yellow.....	3 25 @ 3 40
Mustard, Trieste.....	2 00 @ 3 15
	Per lb.
Canary.....	3 1/4 @ 3 1/2
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

### BAGS AND BAGGING.

Market presents no new or noteworthy features. As is invariably the case at this time of year, business in this department is of insignificant proportions.

Calcutta Grain Bags, spot.....	7 1/2 @ —
San Francisco Grain Bags, 2x3x, spot.....	7 @ —
Wool Sacks, 4 lbs.....	35 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 34
Fleece Twine.....	8 1/2 @ —
Gunnies.....	— @ —
Bean Bags.....	5 1/2 @ 5 1/2
Fruit Sacks, cotton, three sizes.....	5 1/2, 6, 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/2

### HIDES, PELTS AND TALLOW.

The Hide market shows healthy condition, current values being well maintained. Prices for Pelts remain notably unchanged, but demand is not very brisk at full current figures. Tallow is selling about as fast as received, market for good stock being firm at current rates.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	11 @ —	9 1/2 @ —
Medium Steers, 48 to 56 lbs.....	10 @ —	8 1/2 @ —
Light Steers, under 48 lbs.....	9 @ —	8 @ —
Heavy Cow Hides, over 50 lbs.....	9 1/2 @ —	8 1/2 @ —
Light Cow Hides, under 50 lbs.....	9 @ —	8 @ —
Stags.....	6 1/2 @ —	— @ —
Wet Salted Kip.....	9 @ —	8 @ —
Wet Salted Veal.....	9 @ —	8 @ —
Wet Salted Calf.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	15 @ —	13 @ —
Dry Calf, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	— @ —
Salted Horse Hides medium.....	2 00 @ —	— @ —
Salted Horse Hides, small.....	1 00 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 25 @ —	— @ —
Dry Colts' Hides.....	50 @ —	— @ —
Pelts, long wool, 3 skin.....	75 @ 1 00	— @ —
Pelts, medium, 3 skin.....	50 @ 75	— @ —
Pelts, short wool, 3 skin.....	30 @ 40	— @ —
Pelts, shearing, 3 skin.....	15 @ 30	— @ —
Deer Skins, best summer.....	35 @ —	— @ —
Deer Skins, good medium.....	— @ 30	— @ —
Deer Skins, thin winter.....	— @ 20	— @ —
Elk Hides.....	10 @ 12	— @ —
Tallow, good quality.....	5 @ 5 1/2	— @ —
Tallow, No. 2.....	4 @ 4 1/2	— @ —
Goat Skins, perfect.....	30 @ 37 1/2	— @ —
Goat Skins, small.....	10 @ 20	— @ —
Kid Skins.....	5 @ 10	— @ —

### HONEY.

Shipments from this port by sea for the season to date aggregate nearly 4000 cases, mostly Extracted, while for corresponding period last year the quantity forwarded outward by water routes did not exceed 1,500 cases. In values there are no appreciable changes to record, market showing steadiness.

Extracted, White Liquid.....	5 1/2 @ —
Extracted, Light Amber.....	4 1/2 @ —
Extracted, Amber.....	4 @ —

White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7

### LIVE STOCK AND MEATS.

Market for Beef has shown steadiness, but has been rather quiet. Mutton was in moderate request at practically unchanged figures. Lamb now offering is all large, and does not command much of a premium. Veal is in good supply, mostly small, and market for same is easy. Hog market has shown considerable weakness, and prices last quoted have been shaded in numerous instances. Eastern market is lower.

Beef, first quality, dressed, net 3 lb.....	6 @ 6 1/2
Beef, second quality.....	6 @ —
Beef, third quality.....	5 1/2 @ —
Mutton—ewes, 6 @ 7; wethers.....	6 1/2 @ 7
Hogs, hard grain fed, 150 to 250 lbs.....	5 1/2 @ —
Hogs, small, fat.....	5 1/2 @ —
Hogs, large, hard, over 250 lbs.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	7 @ 7 1/2
Veal, small, 3 lb.....	7 @ 9
Veal, large, 3 lb.....	7 @ —
Lamb, spring, 3 lb.....	7 1/2 @ 8

### POULTRY.

Taking the poultry market as a whole, there has been some change for the better since date of last report. Extra large and fat Hens, fine Fryers and Large Broilers were most in request and were about the only kinds which could be said to sell to advantage. Fat young Turkeys were not plentiful and in a limited way brought tolerably good figures. The Thanksgiving market for Turkeys is expected to open strong. Taking the past as a precedent, a market opening high on a holiday week is apt to close slow at reduced figures.

Turkeys, dressed, choice.....	16 @ 18
Young Turkeys, full grown.....	14 1/2 @ 15 1/2
Hens, California, 3 dozen.....	4 00 @ 5 00
Roosters, old.....	4 00 @ 4 50
Roosters, young (full-grown).....	4 00 @ 5 00
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 25 @ 3 50
Broilers, small.....	3 25 @ 3 50
Ducks, old, 3 dozen.....	2 75 @ 3 25
Ducks, young, 3 dozen.....	4 00 @ 5 00
Geese, 3 pair.....	1 50 @ 1 75
Goslings, 3 pair.....	1 75 @ 2 00
Pigeons, old, 3 dozen.....	1 25 @ 1 50
Pigeons, young.....	1 75 @ 2 00

### BUTTER.

The output of the dairy districts of the middle and southern counties of the State is on the increase, while the demand for fresh product is not active, much of the trade being now on cold storage and packed butter. The market is weak throughout, and especially so for fresh of defective quality.

Creamery, extras, 3 lb.....	28 @ —
Creamery, firsts.....	24 @ —
Creamery, seconds.....	21 @ 22
Dairy, select.....	23 @ 24
Dairy, firsts.....	20 @ 21
Dairy, seconds.....	18 @ —
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Picked Roll, 3 lb.....	19 @ 21
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/2

### CHEESE.

Supplies of domestic product are of fair volume, but do not include much milk new of high grade. Latter sort is selling in a small way above quotations. Other kinds are meeting with a steady market. Eastern markets are firm and lightly stocked.

California, fancy flat, new.....	11 1/2 @ 12 1/2
California, good to choice.....	10 1/2 @ 11 1/2
California, fair to good.....	9 1/2 @ 10 1/2
California, "Young Americas".....	12 1/2 @ 13 1/2

### EGGS.

There are no heavy arrivals of choice to select fresh, but there are enough of these for the demand at full current rates, and more than enough of eggs averaging small and which are mixed as to color. The inquiry for other than strictly fancy fresh is mostly for cold storage stock, which is affording retailers in most instances a bigger margin of profit than fresh product.

California, select, large, white and fresh.....	38 @ 40
California, select, irregular color & size.....	30 @ 35
California, good to choice store.....	25 @ 30
California, common to fair store.....	22 1/2 @ 25
Eastern, good to choice.....	22 @ 25
Cold Storage.....	20 @ 25

### VEGETABLES.

The market has ruled quiet in the main since last review, with changes in quotable values not very numerous or pronounced. Onions were in good request and brought better average figures than preceding week, with market moderately firm at the advanced range quoted. Tomatoes continued cheap. Summer squash was in such light receipt as to be hardly quotable.

Beans, String, 3 lb.....	1 1/2 @ 2 1/2
Beans, Lima, 3 lb.....	1 1/2 @ 2 1/2
Cabbage, choice garden, 3 100 lbs.....	50 @ 75
Cauliflower, 3 dozen.....	40 @ 50
Corn, Green, 3 box.....	— @ —
Corn, Green, Alameda, 3 large crate.....	— @ —
Cucumbers, Bay, 3 large box.....	25 @



Okra, Green, 1/2 box.....	30 @ 50
Onions, Yellow Danver, 1/2 cental....	1 25 @ 1 50
Peas, Sweet garden, 1/2 lb.....	2 1/2 @ 3
Peppers, Green Chile, 1/2 sack.....	50 @ 65
Peppers, Bell, 1/2 box.....	50 @ 75
Squash, Marrowfat, 1/2 ton.....	6 00 @ 9 00
Squash Summer, 1/2 small box.....	— @ —
Summer Squash, Bay, 1/2 large box..	75 @ 1 25
Tomatoes, 1/2 large box.....	20 @ 35
Tomatoes, 1/2 small box.....	— @ —

## POTATOES.

Burbanks, Salinas, 1/2 100 lbs.....	1 15 @ 1 40
River Burbanks in sacks, 1/2 cental..	50 @ 85
Mission Garnet Chile, in sacks.....	90 @ 1 20
Sweets, new, 1/2 cental.....	50 @ 75

Demand for shipment continued fairly active for desirable stock obtainable within range of 70@80c., sales on shipping orders at any advance on latter figure being the exception. Sacramento River potatoes received the most attention on outside account. Fancy qualities going to special local trade brought much the same figures as current for some weeks past. Sweets were in liberal supply and lower.

## The Fruit Market.

## FRESH FRUITS.

The Apple market is tolerably firm for choice to select fruit, while ordinary and defective stock is moving slowly at irregular but in the main low figures. Prices are naturally at a rather wide range, with top quotations more readily obtainable for fancy stock than is the lowest price quoted apt to be readily realized for the most ordinary. Early varieties are showing more or less decay, and such stock has to be crowded to sale, going mostly to street hawkers at extremely low figures. Pears were in fair supply, but the proportion of offerings of choice to select was light. High-grade Winter Nells were in very limited stock and were salable to advantage, bringing in some instances in a small way to special custom higher prices than would be warranted as regular quotations. Grapes were in fair receipt, but the quality was not of high average, most offerings showing more or less damage from rain. Ordinary stock moved slowly at a low range of prices, while choice to select were sought after at firm figures, bringing occasionally more than quoted. Seedless grapes were too scarce to quote in regular manner; sales were made up to \$3 per large box. Peaches were in such light receipt as to be hardly quotable, and the same remark applies equally to Figs. Of Persimmons there were more than enough of unripe, while ripe were hardly in sufficient supply for the inquiry. Melons were mostly too ripe to be sought after and met with limited custom at much the same low figures as previously quoted. Berries arrived sparingly, but market for most kinds lacked firmness, choice Longworth Strawberries proving about the only noteworthy exception.

Apples, fancy, 1/2 4-tier box.....	1 25 @ 1 50
Apples, good to choice, 1/2 50-lb. box..	50 @ 1 00
Apples, common to fair, 1/2 50-lb. box.	35 @ 50
Apples, green, 1/2 50-lb. box.....	35 @ 60
Cantaloupes, 1/2 crate.....	50 @ 1 00
Figs, 1/2 2-layer box.....	— @ —
Grapes, Cornechon, 1/2 crate.....	60 @ 85
Grapes, Isabella, 1/2 crate.....	60 @ 85
Grapes, Black, 1/2 crate.....	50 @ 75
Grapes, Muscat, 1/2 crate.....	50 @ 75
Grapes, Tokay, 1/2 crate.....	50 @ 75
Nutmeg Melons, 1/2 crate.....	40 @ 75
Peaches, 1/2 box.....	65 @ 1 00
Pears, Winter Nells, 1/2 40-lb. box....	75 @ 1 50
Pears, other kinds, 1/2 box.....	50 @ 1 00
Persimmons, 1/2 box.....	40 @ 75
Pomegranates, 1/2 box.....	50 @ 75
Quinces, 1/2 box.....	35 @ 60
Raspberries, 1/2 chest.....	4 00 @ 6 00
Strawberries, Longworth, 1/2 chest..	7 00 @ 9 00
Strawberries, Large, 1/2 chest.....	3 50 @ 5 00
Watermelons, 1/2 100.....	— @ —
Whortleberries, 1/2 lb.....	7 @ 9

## DRIED FRUITS.

There is little change observable in the general tone of the market for cured and evaporated fruits, quotable values for most kinds remaining practically as last noted, the only noteworthy exception being Prunes. The latter seem to be going at almost any figure buyers may see fit to name. Especially is this the case in regard to old Prunes, for which there is at present no quotable figure. With new Prunes from the San Joaquin district offering on the 2 1/2c basis for the four sizes, it is not remarkable that old Prunes have been dropped off the list altogether, as regards a quotable rating. While new Santa Claras are quoted on the 3c basis for the four sizes, it is said this figure is being shaded an eighth to buyers where transfers of desirable magnitude are under consideration. For Sonomas 2 1/2c appears to be bedrock figure for the four sizes, delivered on cars, like deliveries being included in all the prices above named. The stocks of deciduous dried fruits, other than Prunes and Apples, are mostly in the hands of wholesalers and jobbers, and are not being crowded to sale at any material concessions, although the movement in either Peaches, Apricots, Pears or Plums is decidedly light at full prevail-

ing values. Figs of the most desirable grades are moving in a moderate way at current rates, with offerings of choice to fancy qualities not especially heavy. It is believed that with the advent of cooler weather in the East, there will be a resumption of activity in the dried fruit market, accompanied by a generally improved tone and possibly some hardening in values for most desirable stock.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 @ 7 1/2
Apricots, Royal, choice, in sacks, 1/2 lb..	8 @ 8 1/2
Apricots, Moorpark.....	10 @ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy.....	7 @ 7 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.....	5 1/4 @ 6
Figs, pressed.....	5 @ 6 1/2
Nectarines, 1/2 lb.....	5 @ 6 1/2
Peaches, unpeeled, fancy.....	7 @ 7 1/2
Peaches, unpeeled, choice.....	6 @ 6 1/2
Peaches, peeled, in boxes.....	12 @ 14
Pears, halves, choice to fancy.....	6 @ 8 1/2
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	5 @ 6
Prunes, 4 sizes, in bags, 2 1/2 @ 3c; 50-60s, 3 1/2 @ 4 1/2c; 60-70s, 3 1/4 @ 3 3/4c; 70-80s, 2 1/2 @ 3 1/4c; 80-90s, 2 1/4 @ 2 1/2c; 110s and less, 1 1/2 @ 2c; these figures for 1901 crop.	

## COMMON SUN-DRIED.

Apricots.....	6 @ 6 1/2
Apples, sliced.....	2 1/4 @ 4
Apples, quartered.....	3 @ 4
Figs, Black.....	2 1/2 @ 3
Figs, White.....	2 1/2 @ 3 1/2
Peaches, unpeeled.....	5 @ 6
Pears, prime halves.....	5 @ 6
Plums, unpitted, 1/2 lb.....	1 1/4 @ 2 1/4

## RAISINS.

While the wholesale market is now quiet, it is understood that a large portion of the crop has been already placed. There is no particular anxiety displayed on the part of packers to book further orders, especially for early deliveries of the better grades. Values continue at much the same low range as has been current since the opening of the season.

Following are the prices for new crop, as fixed by the Fresno Association and the Raisin Exchange:

Descriptions.	Ass'n.	Ex.
Loose Muscatels—	Per lb.	Per lb.
4-crown.....	4 1/2c	5 1/2c
3-crown.....	4 1/2c	5
2-crown.....	3 1/2c	4 1/2c
Seedless Muscatels.....	4 1/2c	5
Seedless Sultanas.....	5	6
Thompson's Seedless.....	6	..
Bleached Sultanas—		
Fancy.....	8 1/2c	..
Choice.....	7 1/2c	..
Standard.....	6 1/2c	..
Prime.....	5	..
Bleached Thompson's—		
Extra Fancy.....	11	..
Fancy.....	10	..
Choice.....	9	..
Standard.....	7 1/2	..
Prime.....	6	..
Seeded—		
Fancy.....	6 1/4c	..
Choice.....	5 1/2c	..
Clusters—	20-lb. bxs.	20-lb. bxs.
Imperial.....	\$3 00	\$2 00
Dehesa.....	2 50	2 50
Fancy.....	1 60	..
3-crown.....	1 20	..
London Layers—		
2-crown.....	1 10	1 25
3-crown.....	1 20	1 35
4-crown.....	1 20	1 75

## CITRUS FRUITS.

Oranges of new crop were in fair supply for this early date, with both Northern and Southern California represented in the citrus fruit offering. As is to be expected, however, much of the fruit is under ripe, and such stock fails to sell readily or to command full figures. Regular sizes of Navels, sufficiently ripe to be palatable, were quotable up to \$3.75 per box. Lemon market did not display much life, nor was there any improvement in average prices realized.

Oranges—Navels, 1/2 box.....	2 50 @ 3 75
Valencias, 1/2 box.....	2 50 @ 3 50
Lemons—California, select, 1/2 box.....	2 50 @ —
California, good to choice.....	1 75 @ 2 25
California, common to fair.....	1 00 @ 1 50
Grape Fruit, 1/2 box.....	2 00 @ 3 50
Limes—Mexican, 1/2 box.....	4 00 @ 4 50

## NUTS.

There has been a moderate movement in Almonds, but at generally easier figures than lately current. Buyers were disposed to operate rather freely at their ideas of values, or about 7 1/2c. for Langue-docs, 8c. for Drake's, and 10c. for I X L's, in carload lots delivered at nearest shipping point. Walnuts are moving outward at steady prices. Peanuts were without quotable change, but not many were required to satisfy the demand at full current figures.

California Almonds, shelled.....	17 @ 20
California Almonds, paper shell, 1/2 lb.....	10 1/2 @ 12
California Almonds, soft shell.....	7 1/2 @ 9
California Almonds, hard shell.....	5 @ 6
Cal. White Walnuts, No. 1 soft shell....	9 @ 9 1/2
Cal. White Walnuts, No. 2 soft shell....	7 @ 7 1/2
Cal. White Walnuts, No. 1 hard shell....	8 1/2 @ 9
Cal. White Walnuts, No. 2 hard shell....	6 1/2 @ 7
Cal. Chestnuts.....	7 @ 10
Peanuts, California, fair to prime.....	4 1/2 @ 5 1/2
Peanuts, Eastern, hand-picked.....	5 1/2 @ 6
Pine Nuts.....	5 @ 6

## WINE.

The wholesale market continues practically lifeless, as is to be expected at this date, old wines being virtually out of first hands and new not yet having had a chance to put in an appearance. Not before the new year will there likely be anything of consequence doing in wines of this year's vintage. Wholesale values for dry wines of 1900 remain nominally 25@30c per gallon. The quotable wholesale range on this year's product is expected to be not less than 20@25c per gallon, with probability of some superior qualities commanding higher figures.

## California Dried Fruit at New York.

NEW YORK, Nov. 6.—Evaporated apples, common, 6@8c; prime wire tray, 8 1/2c; choice, 9c; fancy, 9 1/4@9 1/2c.

California Dried Fruits.—Market quiet at previously quoted values.  
Prunes, 3 1/2 @ 7c.  
Apricots, Royal, 8 1/2 @ 13c; Moorpark, 9 @ 13c.  
Peaches, unpeeled, 6 @ 9 1/2c; peeled, 11 @ 15c.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.....	185,197	2,355,023
Wheat, centals.....	235,929	2,177,993
Barley, centals.....	552,662	3,116,850
Oats, centals.....	19,295	462,803
Corn, centals.....	3,245	25,763
Rye, centals.....	20,913	29,078
Beans, sacks.....	57,921	276,857
Potatoes, sacks.....	34,786	502,385
Onions, sacks.....	4,986	116,266
Hay, tons.....	4,192	56,825
Wool, bales.....	3,076	34,188
Hops, bales.....	268	4,463

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.....	158,192	1,819,434
Wheat, centals.....	209,411	1,872,150
Barley, centals.....	418,191	2,196,634
Oats, centals.....	23	2,117
Corn, centals.....	4	7,966
Beans, sacks.....	2,142	14,215
Hay, bales.....	127	4,740
Wool, pounds.....	511,318	511,318
Hops, pounds.....	44,498	216,242
Honey, cases.....	509	3,270
Potatoes, pack's.....	2,287	16,327

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## Horned Toad Studies.

Ten or twelve years ago I began a collection of the so-called horned toads along the base of the Sierra Madre mountains, in the San Gabriel valley, California, with the view of testing their powers of mimicry. These lizards are very common here, and it was an easy matter to corral twenty or thirty. They were well protected by their power of simulating the color of their immediate surroundings, and it was often difficult to see or distinguish them from the ground upon which they rested. Those on dusty roads were dust colored, those found among the rocks were frequently mottled, while nearly all of the specimens observed near the base of the mountains, where there was abundant verdure, were highly colored with vivid tints of yellow, red, brown and white.

These specimens were divided up into pairs and placed in enclosures 2 feet square, with a wooden fence 3 inches in height, so that there was perfect light from above. Each corral was arranged with a different colored floor—thus one had a white sand bottom, the next was green, the next brown and a fourth black and white—in all a number of changes being produced by the arrangement of pebbles, leaves and sand. In these corrals the lizards were released and changed about that their adaptation to new surroundings might be observed. But it is not to this remarkable protective faculty that attention is called, but to a protection so singular that it might well be conceived to be an effort of the imagination.

In handling the lizards, which are perfectly harmless, despite their warlike array of spines, I noticed that, although I had treated them gently, my hands were spotted with blood; and upon examining one of the animals, I found that its eyes were suffused with blood, while in another specimen its eye appeared to be destroyed, or represented by a blood spot. I at first assumed that, while together, the animals had injured each other with their spines; but suddenly, when holding a lizard near my face, it depressed or lowered its head, and I immediately received a fine spray-like discharge, which proved to be blood. A glance at the animal showed that its eyes were bloody, as though ruptured. The volley had come so suddenly that I did not see it, but I was convinced that in some way the lizard had ruptured a blood vessel in its eye and had forced the fluid through the air a distance of at least a foot.

I immediately began to experiment with the little captives, and found that the above explanation was the case beyond question, but only a small percentage of the lizards could be induced to respond to my methods. Giving them slight taps on the head seemed to exasperate them the most, and they would lower the head convulsively, the eye would be depressed and a jet of thick blood, or blood which congealed very quickly, would be shot in a delicate stream to an extraordinary distance. Suspecting that the lizards did not consider me a dangerous enemy, and that I would have better success with some animal, I called in the aid of a fox terrier, for which the little creatures evinced the greatest fear. When the dog placed his nose near them, they crouched low and endeavored to shuffle themselves under the sand out of sight; but when the dog was urged on, and began to bark, they would draw back, hiss slightly, then depress the head, and the white face of the enemy would at once be spattered with drops of blood. Such a discharge was very effective, and, when received in the nostrils, it caused the dog no little annoyance, and he ran around excitedly for a moment vainly endeavoring to rid himself of the fluid, which evidently had some disagreeable feature.—Charles Frederick Holder in Scientific American.

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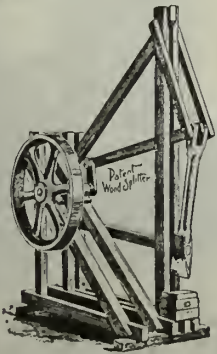
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We have a few pigs ready to ship and other litters coming on.  
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The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

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Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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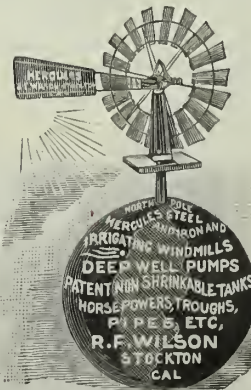
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"Greenbank" Pure 100% Caustic Potash and 98% Powd. Caustic Soda.

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## THE VETERINARIAN.

## The Tuberculosis Question.

Prof. Crookshank, in his introductory address at the Royal Veterinary College, Camden Town, recently dealt with the subject of tuberculosis, referring, of course, to Dr. Koch's recent declaration as to the difference between the human and bovine forms of the disease, and, while differing from him to the extent of stating that human and bovine tuberculosis were distinct varieties of the same disease, he said he was in full agreement with Dr. Koch's opinion that if infection occurred at all, it was very rarely, but he could not accept the statement that human tubercle could not be experimentally inoculated in bovines. There was, he said, just a possibility that, inasmuch as human tubercular virus can be grafted in the cow, there may also be instances of invasion of the human tissue with bovine bacilli. This, it may be observed, remains to be proved, and in the meantime the results of Dr. Koch's two years' experiments, proving that human tuberculosis cannot be conveyed to bovines, hold the scientific field.

On the whole, however, Prof. Crookshank's remarks were reassuring, as he said that such an occurrence as invasion of the human tissue with bovine bacilli could only be exceptional. If it were the rule, he added, the inhabitants of every country in the world in which bovine tuberculosis was prevalent must have been decimated by tubercular disease, owing to the frequency with which tubercle bacilli occur in milk, cream, butter and cheese, and the quantity of meat derived from tubercular animals. In attributing abdominal tuberculosis in children to infection by cow's milk, those who supported the theory entirely set aside the opportunities for infection with the virus from a human source. If tubercle in the children did result from infection of the digestive tract, there were, he said, not only opportunities of self-infection when there was concurrent disease of the lungs, but there were obviously many ways by which a child might be infected by the mouth with virus from a human source. Prof. Crookshank was convinced that suspicion of danger of infection by cow's milk could be easily removed and public anxiety relieved. The problem resolved itself into better inspection of dairies. By this means any danger which may exist is practically eliminated. It was only necessary to insist in both private and public dairies that "piners" or "wasters" must be destroyed, and all cows with diseased udders must be removed. There was then no necessity to advocate the boiling of all milk. As regards meat inspection, he said the carcass should be condemned when the disease was generalized; but if the carcass was well nourished and the meat healthy in appearance, the existence of small local deposits of tubercle in the organs was not a sufficient reason for condemning the flesh as unfit for food. As a matter of fact, there was, in Prof. Crookshank's opin-

ion, no justification for such wholesale destruction of valuable food. To enforce it would almost involve the ruin of the agricultural industry, for no Government would face the question of compensation on such a colossal scale.

**SIX THOUSAND ACRES FOR BEETS.**—Red Bluff Cause: It is said that those who experimented with sugar beets on the Finnell place the past season will go more extensively into the business the coming season.

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will begin his reception Dec. 2d, in a reproduction of his wonderful palace at the North Pole.

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### Star Drilling Machines

and put it to work. You can make more money drilling wells of all kinds than you can make with the same amount of money invested in any other business. Write us at once for free catalog and proofs of these statements.

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**Do Not Delay Vaccinating--Your** herd IS LIABLE to attack NOW and if you delay vaccinating until after Black Leg has broken out you are almost sure of a 5% loss, and as even a 1% loss will cost more than vaccinating, it pays to vaccinate before trouble begins.

**Our Vaccines** are tested on control animals before placing on the market and they are subject to exchange for fresh vaccine if not used within six months from date of manufacture. **They have been successfully used for three years in the worst infected districts of California.**

**Our prices are lower than others',** and the growth of our business in the last three and a half years attests that our products and liberal methods are meeting with the approval of stockmen.

**Our friends are among those who have hitherto used foreign and other vaccines.**

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Write us for booklet on **BLACK LEG** and **ANTHRAX**. They are readable and interesting even if you apprehend no trouble from these diseases.

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## Improved Fresno Scraper.

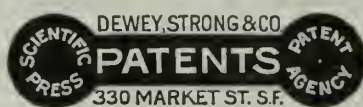
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### Farm Wagons.

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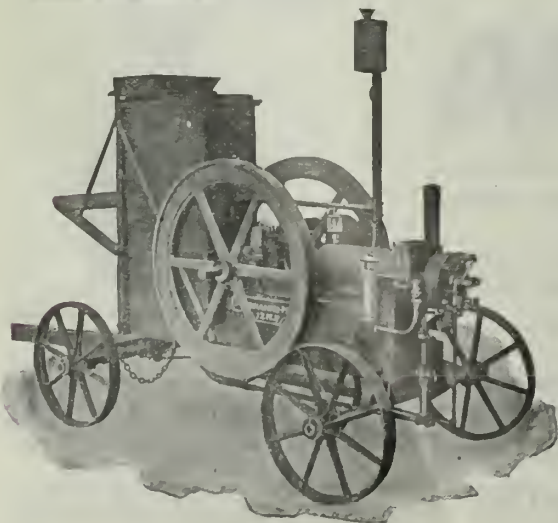
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## Patrons of Husbandry.

### Tulare Grange.

TO THE EDITOR:—Tulare Grange met in regular session on Saturday, Nov. 2. Under the head of new business the subject of the indebtedness of Tulare irrigation district and the payment of its bonds were talked of. Incidentally were discussed the district supply of water, its duty and the amount of land that can be benefited. It was strictly an interchange of ideas; no conclusions were sought to be determined by it.

The National Grange Lecturer's subject for November was taken up—"What Can We Do to Make Our Farm Homes More Convenient, Comfortable and Attractive?"

The Lecturer read the comments of the National Grange Lecturer on the subject, and a general expression of views were given. It was conceded that a comfortable, well-kept farm home adds attraction to farm life; that a good wife and children, brought up to industrial habits, greatly aid in making the home attractive; that the members of the family, from parents down, should be kind and considerate of each other; that the house should have all reasonable conveniences for the wife in her daily duties, such as water laid on, and in the design of the home the arrangements suggested by the wife should be carefully followed; that deciduous shade trees, not too near, and flowers should be grown about the home; that books of fiction by the best authors, histories, books of travel, newspapers and agricultural works should be on the shelves and on the tables. Where such things are kept, and surround the farm home, it will be attractive.

The question box was then opened, and the following questions taken out and discussed: 1. What can we do to secure a better attendance at the Grange? 2. What time of year is best to poison squirrels? 3. When should alfalfa be sown, how much seed should be sown to the acre and when should it be cut? 4. How should agricultural fairs be managed, and who should have the management of them?

The first three questions were discussed with spirit, the fourth being referred to Bro. Miot, Secretary of the Twenty-fourth Agricultural District, to read a paper with his views at our next meeting. Sister Rosson will lead with a paper at our next meeting on "Books and Newspapers in the Home," to be followed by Sisters Morris, Styles and Wishon and Bros. Mull, Eekles and Holemb.

J. T.

### Shorthorn Movement.

We hear through the Kansas City Star that the Barnhart Co., of Suisun, Cal., have purchased a trainload of Durham heifers for their ranch in California. These are all selected calves. It is also interesting to note that Peter Saxe & Son, of San Francisco, have sold the Barnhart Co. recently seven head of thoroughbred Durham bulls raised in California to be bred to the imported heifers.

### Catarrh Cannot be Cured

With LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.

F. J. CHENEY & CO., Props., Toledo, O.  
Sold by druggists, price 75c.  
Hall's Family Pills are the best.

## What? Fence?

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**AMERICAN Field & Hog FENCE**  
Best steel wire, heavily galvanized. Sold every where. If your dealer hasn't it, write to  
**AMERICAN STEEL & WIRE CO.**  
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— AT THE —

## BUFFALO EXPOSITION.

The award of the GOLD MEDAL to the De Laval Cream Separators (the highest and only award of its kind) at the Buffalo Exposition, was well supported by the magnificent work of the De Laval machine used in the Model Dairy of the Exposition, which made a record in practical work, under ordinary every-day use conditions, in every way unapproachable by any other than an improved "Alpha-Disc" De Laval machine.

PAN-AMERICAN EXPOSITION, 1901.

(COPY)

BUFFALO, N. Y., Oct. 21, 1901.

THE DE LAVAL SEPARATOR CO.,

74 Cortlandt St., New York.

GENTLEMEN:

The work of the De Laval Centrifugal Cream Separator, Dairy Turbine size, guaranteed capacity 1,000 pounds per hour, used by us in the Model Dairy at the Pan-American Exposition, Buffalo, N. Y., brought out the following points:

First: The machine has been run from August 9th, 1901, to September 28th by the buttermaker and his assistant, and had no special attention given it by any expert of the Company.

Second: The official tests were made by two of the best experts in Babcock testing, and for the whole time, or 71 consecutive tests, shows a loss of .0161 of one per cent. of butter-fat.

Third: It was run at its full guaranteed capacity of 1,000 pounds per hour, at times exceeding that amount, but at no time was the feed reduced to make a skimming record.

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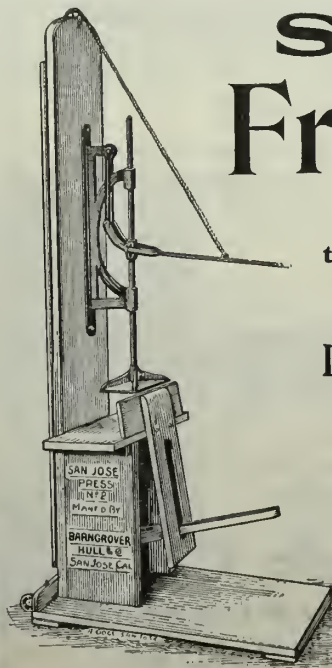
## OTHER GREAT EXPOSITIONS.

The supremacy of the De Laval machines at Buffalo is a continuation of their triumphant record at all previous great exhibitions. At the World's Fair, Chicago, in 1893, they received the Gold and only Medal awarded by the regular jury of awards and were the only separators used in the Model Dairy. At Antwerp in 1894 and at Brussels in 1897 they received the Grand Prizes or highest awards. At Omaha in 1898 they received the Gold Medal, and again at Paris in 1900 the Grand Prize or highest award.

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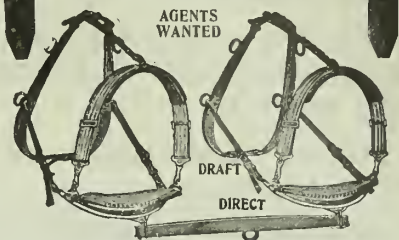
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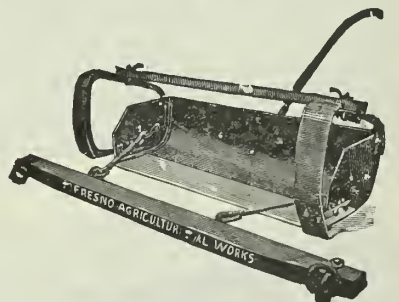
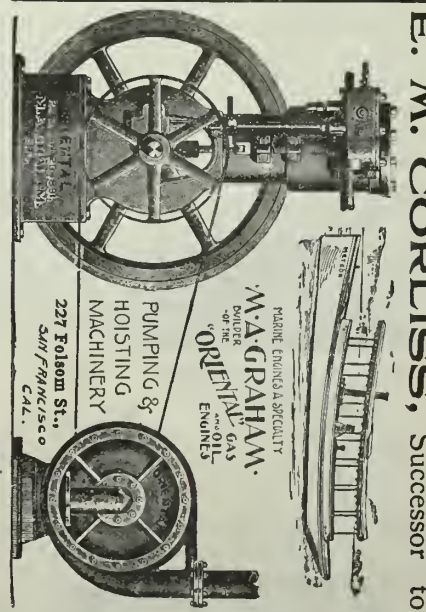
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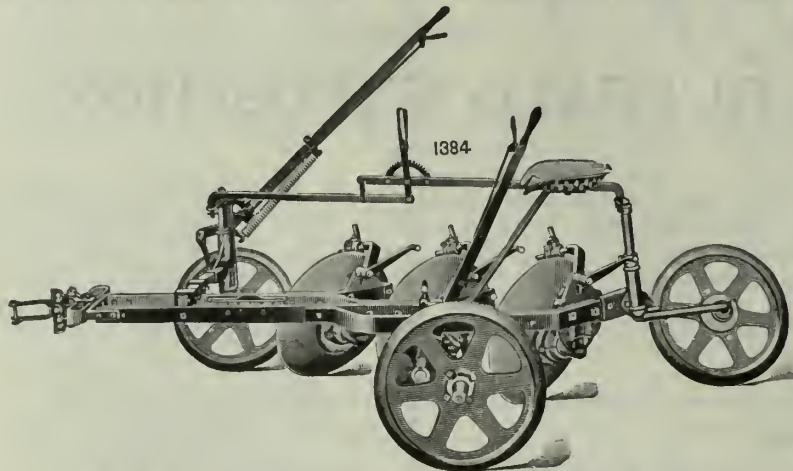
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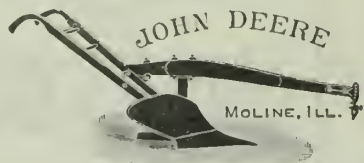
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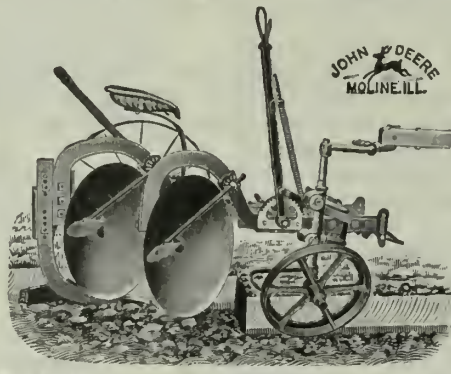
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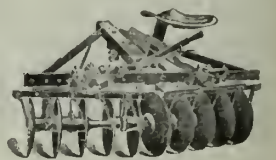


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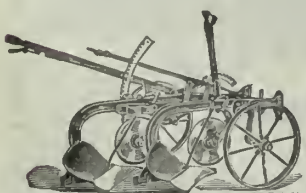


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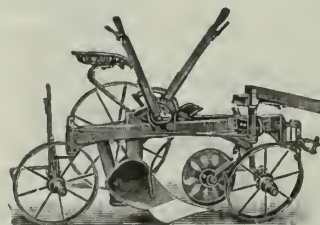
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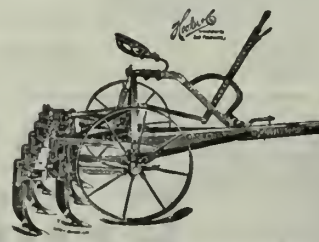
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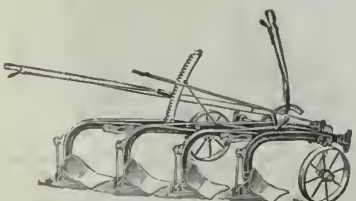
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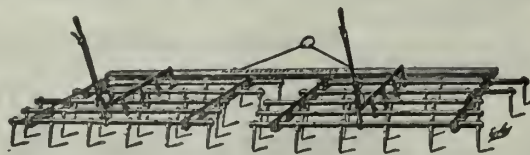
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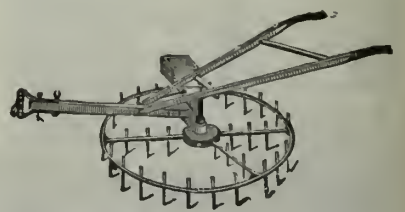
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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 20.

SAN FRANCISCO, SATURDAY, NOVEMBER 16, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

## In the San Joaquin.

After one has traversed the State in all directions and has made all the exclamations which befit the various forms of beauty and the richness of industrial opportunity and achievement which he may see, he is apt to return to the great central valley and lift his hands in silence, because here is immensity, capacity and variety which transcend words. Even those who are thus impressed do not begin to appreciate the value which this vast central region will prove to California in coming generations. Nearly fifteen million acres of level land, disregarding its sloping environments, with soil as deep and rich as the world knows, with air unvexed by tornado and so lightly touched by frost that the earth constantly gladdens with verdure beneath the winter sunshine—such a land constitutes a force which will carry the State into the front rank of population and prosperity as the years pass by. Of this vast valley the San Joaquin is the greater part, both in area and in present development. The Sacramento awaits awakening; the San Joaquin presses onward. In transportation it has the advantage of new railway lines and is now enjoying the promotive strength of the great Santa Fe corporation, which is now establishing its main overland line to Pacific waters through the San Joaquin valley to a point on the Bay of San Francisco. This corporation has just issued a very interesting publication bearing the name of the valley and devoted to an exposition of its resources and development. A group of valley pictures on this page are drawn from this source. We group them to suggest pertinent facts. The great valley oak, one of the grandest trees of California, finds its rival in cultivated growth in the splendid fig tree. In the newer life of the fig the San Joaquin bids fair to outstrip the greatest achievements of Smyrna. In the San Joaquin there are lands so rich that they can well endure double cropping, and satisfactory growth of trees is secured even amid heavy growth of roots and squashes, when moisture enough is supplied for both. Next come two pertinent suggestions of immense field products—the combined harvester, which finds no obstacle to its rapid working in the smooth and fenceless plains, and the stacking of alfalfa, a plant which is each year increasing in area and turning even the summer hues of the valley into a green rivaling the verdure of the winter grain. Another rapidly growing valley interest is suggested by the view of the bee farm.

But the finest things now growing in the valley are the homes of the settlers, of which another picture gives intimation. Upon the multiplication of such homes the quick realization of the valley's future depends, and no part of the State is moving more rapidly.



A Native Valley Oak.



An Orchard Fig Tree.



Heavy Beet Crop in Young Orchard.



Squashes Among Fruit Trees.



The Combined Harvester.



Alfalfa Haying in the Valley.



A Rose Covered Cottage.



A Valley Bee Farm.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, November 16, 1901.

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## The Week.

Again we have had good rains, covering quite an area, and again bright autumn sunshine has followed. More strongly than ever the thought is turned to field work and a wonderful amount of plowing is being done. Planning for fruit planting and orders upon nurserymen for popular varieties are going forward more rapidly than usual. Enterprising nurserymen are already making their announcements prominent in our columns and planters should place their orders early. It is true we have, fortunately, a very long planting season; but there is going to be a sharp run on favorite varieties probably and a traffic good for both sellers and buyers who begin early. The nursery business is too often crowded into too short a season. The weather this year favors a more careful trade through a longer period, and this is of advantage to all concerned.

Wheat values were once more on the up-grade the past week, but once more they are back to old levels. Unlike Banquo's ghost, they keep down. Ocean freight rates are dropping, but thus far wheat has received little or no benefit therefrom. Five cargoes of wheat were dispatched this week to Europe, adding about \$200,000 valuation to our exports. Barley is worth no more than a week ago, although showing a little upward tendency part of the time. Nearly 6000 tons of barley have gone outward this week, including a 5000-ton cargo for New York, valued at \$91,000. Oats are quiet, with values steady, especially for best qualities. Corn of new crop is beginning to come forward in good condition, but there is still plenty of damp stock, with market for this sort slow and weak. A steamer in the German line took 550 tons rye; plenty left and offering at old figures. Beans are in liberal receipt, but are also going outward in heavy quantity, mainly Large Whites and Limas, values for best qualities ruling quite steady. Prices for bran and all other mill offal are again marked down, and values have not yet touched bedrock. The hay market has been moving in about the same groove as the preceding week, with a tendency to slightly lower values on common and medium grades. Beef is higher, cooler weather increasing the demand. Prices for mutton show no quotable improvement. Hogs are bringing about the same figures as a week ago, but lower quotations are predicted for the coming week. Butter is again marked down, with poor prospects of material recovery in the near future. Cheese is meeting fair custom, current rates being well maintained. Hens which can lay a strictly fancy egg about once a day are now worth

cultivating, with this class of hen fruit selling up to 45c per dozen in a very limited way. Eggs which were turned out last spring, however, are still hanging around, and these are to be had down as low as 25c per dozen, and even less. Poultry of nearly all descriptions has met with a fairly good market, small young chickens in fine condition taking the lead in point of favor with buyers. Potatoes are higher, as also onions, both being in request for shipment. Neither choice apples nor pears are plentiful and both sell well. Oranges are slow and lower, and lemons are as cheap as ever. Evaporated apples are scarce and higher, the only change for the better in the dried fruit line. Almonds and walnuts are moving at steady prices. Wool is quiet and hops ditto. Honey is going out lively, one block of 1000 cases being sent afloat this week for England.

We prophesied last week that the small deficiency in the overland shipments of deciduous fruits would soon be made up. This has come true already, so far as number of carloads go. The season's total at the close of last week was 6260 cars, which is 9 cars in excess of the total of 6251 cars for the corresponding date of last season. It is to be remembered, however, very properly remarks the Sacramento Bee, that early in the present season the carload minimum was reduced from 26,000 pounds, which prevailed last season, to the older figure of 24,000 pounds. As nearly all the fruit shipped this season was in carload lots not exceeding 24,000 pounds, each car represents twelve tons, instead of thirteen tons as in 1900. To equalize the figures, for the purpose of comparison with those of last season, an allowance of about 500 carloads should be made. But part of this will be made up of apples, which are in sharp demand and will be going forward for a month yet probably. Ninety cars of apples went East last week. As a counterbalance, however, upon the less weight of fruit this year, comes the better prices which have been realized. The receivers have used so little red ink that they report the bottle dried up. This is the best thing of the whole season. It would avail little to move great weights were there not some money in it, and it is a good sign that there is a scarcity of complaint this year, and considerable direct testimony that profits have been secured.

Returning to the subject of fruit planting, it is clearly true that some fruits often seem in excess of present requirements. It is the case now with the prune; but the prune will right itself for all those who have prunes in the right places and handle them aright. Of course, we should plant nothing now, except there be a chance to strike the large sizes, either by variety or by location and handling of the trees. But, aside from prunes, it would be hard to name a fruit which is not in good shape as a broad proposition, though there may be local misfits and excesses. There is just as good an outlook for wise fruit planting as there ever was. Barring prunes, there was no good fruit which did not do well this year, both in fresh and dried forms. Raisins have suffered at the opening, but there is every reason to think that raisins will sell well after this. We see nothing to beget doubt that the old principle that the best fruit in the best soil with the best treatment is just as applicable as ever. Though we constantly counsel variety, and the expansion of the animal industry in all its branches, we still advise, also, more fruit planting for people who have the taste and the conditions for it.

In citrus fruits there is no doubt at all that the season which closed November 1st has proved, on the whole, very advantageous. One has only to go into the citrus regions as we have done during the last few months to find ample evidence of prosperity and satisfaction. The aggregate is fine—something like 22,000 cars of oranges, to which may be added 3000 cars of lemons, making a total of nearly 25,000 carloads of citrus fruits, and returns to growers have been generally satisfactory. The citrus fruit growers are in full heart both north and south, organization is proceeding, arrangements of all kinds are being improved and the great citrus fruit interest, under the protecting governmental policy which now prevails, promises to advance to high place among American horticultural interests. The people are just beginning to learn how wholesome and delicious

the fruits are, and the outlook for wisely planned and located plantings is as bright as ever.

Such a dish of fruit reminds us of the great convention which will assemble in this city under the auspices of the State Board of Horticulture during the first week of December. The preparations for the platform features and the topics for committee deliberation have fallen almost wholly into the hands of President Ellwood Cooper this year, and he has given much careful thought and effort to them. It is to be expected that they will prove unusually pointed, practical and fundamental. They will strike right at the heart of the situation in California fruit growing and will appeal to all as most significant and important. The full programme of the four days' work will no doubt very soon appear, and we hope our readers will watch for it in our columns. Let them plan also for attendance. Discussions will be held which it will be worth while to traverse the State to hear, and each attendant adds, of course, to the sum total of the body's insight and wisdom. The convention will be well housed, well caparisoned and profoundly entertained and instructed. Let every fruit man and woman who can compass attendance do so.

## QUERIES AND REPLIES.

### Treatment of Girdled Trees.

TO THE EDITOR:—Having recently purchased your book entitled "California Fruits and How to Grow Them," and as you extend to all readers a welcome to ask for facts which to them may seem important, I would like to have your advice on how to save girdled trees—how to treat them.—ORCHARDIST, Berryessa.

The treatment of girdled trees will depend upon whether you see the injury before the wound becomes thoroughly dried. If it is a fresh girdling, there are usually granules of the old inner bark left upon the surface, which under favorable conditions will extend themselves, and the injury will be restored by natural process. Such conditions consist in preserving the moisture, and this is promoted by making a paste of clay and cow manure, stirring it up thoroughly, applying it to the wounded surface somewhat thickly, then binding closely with a piece of sacking. This sticky and fibrous material will keep the surface moist while a new bark is forming. If, however, the injury was done some time ago and the surface has become thoroughly dry and the bark so completely removed that there can be no sap flow, the tree can be saved by taking pieces of young growth from  $\frac{1}{4}$  inch to  $\frac{1}{2}$  inch in diameter, cutting the ends to wedge shape and inserting the wedges into the healthy bark above and below the injury. If these pieces are cut a little too long, they can be sprung into places made for them and hold themselves firmly in place. Put quite a number of these around the tree, and, to protect them from outside injury and to prevent drying, cover with a piece of sacking for a while. They very soon grow into the bark above and below, and the sap then flows readily through these pieces. This is an old practice for saving valuable trees and works very satisfactorily if the connections are well made.

### Improvement of Sandy Soil for Melons.

TO THE EDITOR:—I wish to raise an extra early crop of melons next year upon a very light, sandy soil that was injured by grading and has been further exhausted by raising corn fodder for several years. What is the best fertilizer for it and when applied? What is the best fertilizer for carnations to increase size of blossoms?—GARDENER, San Bernardino.

You cannot do anything better in preparation for melons on the soil you describe than to make a generous application of stable manure. If the soil was a little more retentive, we would advise you to plow this in deeply, and this might be a good practice even with your soil, for this would disintegrate readily and would not too greatly increase the lightness of your soil. If, however, such material is not available, and you can get plenty of fresh stable manure, spread it over the surface and allow the rains to leach out the soluble parts. The finer materials will sift through upon the soil; the coarse can be raked and burned before the spring plowing for the melon crop. In this way you can get the goodness of the manure without endangering the retentive condition which is desirable to preserve in such a light soil as you describe. If you cannot get stable manure for this



purpose, a complete fertilizer, containing nitrogen, phosphoric acid and potash, such as is used by the orange growers in large quantities, would also be valuable for your purpose and should be applied at the spring plowing. This same treatment all through would be the best for your carnations. A nitrogenous manure ministers directly to the increase of size of the blossom, but must be used in moderation, for fear of causing the bursting of the calyx, which excessively rank-growing plants are apt to do.

#### Budding Almonds.

TO THE EDITOR:—We have many seedling almonds which we wish to bud over to standard varieties. We find the trees coming from nuts planted in place are better than transplanted trees, but when we come to bud them in July almost all the buds fail, although we try to protect them with waxed bands, etc. Our rainfall is short. What can we do to succeed in budding, or should we graft?—READER, Antelope Valley.

Our correspondent is situated in one of the environs of the Mojave desert. Though the almond usually buds very freely, taking either almonds, peaches or prunes without difficulty, the trouble in this case probably is that the budding is done too late in the season under the arid conditions. There must be a good sap flow after the time of budding in order to sustain the buds. This could be secured by irrigation, but if that is not feasible you must try budding earlier in the season. As soon as the young shoots of the almond have run out about a foot pinch off the ends, and this will tend to develop the buds of the axils of the leaves. Just as soon as these buds are plump and strong commence your budding. This condition ought to arrive early in June, supposing that your growing season starts as early as it does in the valleys. You will then have, perhaps, rather small wood to bud into, but by working at the base of the shoots the wood should be large enough for the purpose. As soon as these buds are seen to have taken well the top can be removed and growth started on the bud at once. The shoot will not be large, probably, but the union will be complete and everything right for a good growth the following season. If this does not enable you to make the buds succeed, we know of no way in which it can be done. Grafting is rather difficult and uncertain and budding is superior if it can be made to work. It might, however, be desirable to put in some grafts for experimental purposes early this spring, and then try the June budding, and you will have data to indicate what your future course must be.

#### A Monstrous Walnut.

TO THE EDITOR:—I send a sample of a very large English walnut which is borne on two trees on my place. The place has changed hands and no one knows where these trees came from. Can you tell what it is?—GROWER, Orange county.

The nut is very large, nearly 3 inches in length, somewhat irregular in form and lumpy in surface. As Mr. Felix Gillet of Nevada City is familiar with the monstrous varieties of Europe, and has in fact several of them fruiting on his place, we sent the specimen to him for examination. Mr. Gillet finds it so different from the other large European varieties which he has that he considers this one a seedling. We know there are seedlings of large size in the Orange county region. There is one called the "Klondyke," but we are not familiar enough with it to compare it with this specimen. Mr. Gillet says the nut is not regular enough in shape to be very desirable, for there are large French varieties which can be propagated by grafting, which give nuts of a large size and of more symmetry and beauty. Again he says that this nut showed on opening only a shriveled kernel, while the best French large varieties have large meats filling the shell. Possibly the shriveled kernel was an accident to this specimen and others may be well meat. Of course, if the nut has the bad habit of empty kernels it is practically worthless.

#### Morning Glory Once More.

TO THE EDITOR:—Will you inform me how to eradicate the wild morning glory? We have two or three small patches located on the rancho and are anxious to prevent its getting any further start, and are willing to take heroic measures to kill it. What we desire to know is the best and surest method.—RANCHER, Brentwood.

The only successful way to kill morning glory consists in cutting it under the surface of the soil once

each week or ten days during the whole season. Cutting must always be done before the upward shoots reach the light. There is nothing gained by allowing the surface to become green and then cutting. Use the flat knife or horizontal weed cutter and run this through the whole patch, and a little beyond, at a depth of about 3 inches below the surface, whether there is any sign of the plant or not. No plant can stand smothering in this way. Some claim to have stamped it out by one year's treatment and others claim that two years are necessary. It is troublesome and expensive to pursue this course, but out of dozens of remedies experimented with this alone has proved successful.

#### Blister Mite, Etc.

TO THE EDITOR:—I send some leaves of the Bartlett pear. I set out 175 one-year-old trees that seemed to be healthy and in good condition, but they have not grown as they should. The leaves got spotted and then the trees stopped growing. Please tell me what is the matter with them and what remedy to use. None of the trees have died; the bark looks good and healthy.—GROWER, Paradise.

The leaves of your pear trees were affected early in the season by a very minute insect called the blister mite, which bores into substances of the leaf and makes a habitation from which it goes back and forth. It injures the leaf considerably, but does not cause the trees to stop growing, as you describe. It seems likely that the young trees must also have suffered from lack of moisture in the soil. A good remedy for blister mite is to spray about the time the leaves are coming out with kerosene emulsion. Then keep the trees well cultivated, using irrigation, if necessary, to secure moisture in the soil. The fact that the bark of your young trees now look well would indicate that there is still promise for them, if they have better treatment during the next summer. Killing the mites is important to do, but it is evidently not all that the trees need.

#### Plants for Vine Tying.

TO THE EDITOR:—What plant should I grow for tying vines to high stakes—hemp, ramie or New Zealand flax? Is there anything better that can be grown on the place.—VINEYARDIST, Yuba City.

Neither hemp nor ramie would be any account for vine tying unless the fiber is extracted and manufactured into some sort of a cord. The raw fiber would soon disintegrate and be worthless. New Zealand flax (*Phormium tenax*) is a plant well adapted to the use which you propose, because the leaf, simply torn up into ribbons, furnishes strong bands which become even stronger on drying. They can be trusted to hold for a long time. This plant grows very freely in the coast region and in the cooler, moister parts of the interior valleys. We presume that by giving it partial shade and plenty of water it will make satisfactory growth with you. Aside from this, the only plant we think of is the Osier willow, which is also good for vine tying, but does not make so strong and tight a tie as the New Zealand flax.

#### Bluestone for Smut.

TO THE EDITOR:—How strong is the bluestone solution to be made for treating seed wheat to prevent smut? Is there any more recent remedy?—READER, Stanislaus county.

The common practice is to allow cold water to dissolve as much of the bluestone as it naturally will. The amount is limited, and it has not proved too strong for the treatment of the seed grain. It would not, of course, do to use all the bluestone which warm water would dissolve. If bluestone is put in a tank in excessive amount and cold water added as required, the solution comes to a uniform strength automatically. The prescription of amount in definite quantities is sometimes given as one pound of bluestone to four gallons of water. Recently formalin has come into use as a substitute, the rate being one pound of formalin to fifty gallons of water. You may like to make trial of this in comparison with bluestone and note the results.

#### Phylloxera in Fresno.

TO THE EDITOR:—Have you learned anything further regarding phylloxera conditions in Fresno county since your article in the PACIFIC RURAL PRESS of August 3? Are there any resistant vines that will produce a profitable crop direct, without grafting?—H. W. WRIGHTSON, Oleander.

The University experts have made quite extended

examinations of the regions and have found the infested area quite limited as compared with the whole acreage planted. Report has been made to the County Horticultural Commissioners and they are authorized under the law to do what they see fit about it. The people of the county can actuate them through the County Supervisors. Though some of the resistant vines have value as wine grapes, no adequate trial has been made to determine widely their worth as direct producers. There will have to be much more done along this line if anything is to be accomplished, and few people take any interest in it at present.

## WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending November 11, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

#### COAST AND BAY SECTIONS.

Nearly normal temperature prevailed most of the week, with considerable cloudiness and fogs. Rain commenced falling Saturday and continued at intervals Saturday night and Sunday. The rainfall in San Luis Obispo county to date exceeds that of last year. Nearly half an inch of rain fell in Monterey on Saturday night. It is probable that the bean crop has been damaged to some extent, but other crops were under cover. Early sown grain and pasturage were greatly benefited, and the soil is in good condition for plowing and grain sowing. Green feed is plentiful. Oranges are of excellent quality and the yield is about average. Pruning is progressing.

#### SACRAMENTO VALLEY.

The weather was warm and clear most of the week, becoming cooler toward the close. Light rain fell throughout the valley Saturday and Sunday, and was beneficial to all farming interests. Early sown grain has made a good start and is looking well. New grass is growing rapidly, and feed is plentiful. Summer-fallow seeding is completed in some sections. The soil is now in excellent condition, and plowing is progressing. At present the prospect is good for a large acreage of wheat. Orange picking and shipping continue; the fruit is reported excellent in quality and the yield satisfactory. Tree pruning is in progress.

#### SAN JOAQUIN VALLEY.

The weather has been generally clear and warm during the week, with cool nights and heavy dews. Rain fell in nearly all sections Saturday night and Sunday, and was of great benefit to farming interests. The raisin crop is all gathered and under cover. In some sections there are still a few late wine grapes on the vines, but they are being gathered rapidly and sent to the wineries. Orange picking and shipping continue. Tree pruning is progressing. Early sown grain and pasturage were much benefited by the rain, and are making good growth. Plowing and seeding continue. A good crop of Egyptian corn is being gathered. In some sections it is reported that the rain of last week injured early grain, causing it to sprout, but being insufficient to make a healthy growth.

#### SOUTHERN CALIFORNIA.

Weather conditions have been about normal during the week. Rain commenced falling Saturday night, and was general throughout the south during Sunday, the precipitation varying from .40 to 1 inch. Raisins, hay and grain were all under cover, and the rain caused no damage except possibly to beans. Orchards and pasturage were greatly benefited, and in many places the soil is now in good condition for plowing and seeding. Walnut picking is completed; the quality is better than for several years and the yield about the same as last season. Raisins are reported of superior quality and the yield about average. Citrus fruits continue thrifty.

LOS ANGELES SUMMARY.—Cloudy, foggy weather was unfavorable for bean threshing and late crops. Harvest is not yet finished, but no reports of the effect of the storm just passed. Plowing and seeding are progressing. First sown grain is coming up.

EUREKA SUMMARY.—Some farmers are harvesting their corn crop; yield very light. Fruit is nearly all gathered. Grass is good and stock looking finely. Plowing is progressing.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, November 13, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week...	Minimum Temperature for the Week...
Eureka.....	.78	6.78	8.70	6.61	58	38
Red Bluff.....	.34	4.24	3.75	3.25	76	42
Sacramento.....	.78	2.68	1.92	2.32	74	44
San Francisco.....	.89	2.31	2.12	2.69	66	50
Fresno.....	.52	1.65	.49	2.41	78	44
Independence.....	.02	1.09	.84	.88	70	34
San Luis Obispo.....	1.04	3.90	1.93	2.47	72	42
Los Angeles.....	.44	2.44	.26	1.39	76	46
San Diego.....	.41	.75	.30	.82	68	52
Yuma.....	.00	.22	.02	1.10	86	48



## HORTICULTURE.

### Walnut Varieties in Southern California.

Mr. J. W. Mills, foreman of the University sub-station near Pomona, gives the Times of that place a sketch of the behavior of walnut varieties, chiefly on the basis of station observations.

Walnuts were discussed at the last meeting of the Pomona Farmers' Club and samples of the largest French varieties were exhibited, the nuts having come from the Pomona Experiment Station. The extremely large size and fine appearance of the samples created much comment and numerous inquiries have since come in, asking where the trees can be secured. The varieties exhibited at the club meeting were fair samples, and from the merits of the fruit as seen there seemed to be no doubt that they were the best varieties to plant. When other features of the varieties are taken into consideration, there is considerable doubt on that point. The varieties exhibited were not recommended for planting.

Bijou is a large, irregular shaped nut. The shell is soft and is easily broken with the hand. The suture is sometimes so weak that the kernel is visible through the opening that is sometimes formed during the drying. This allows worms to enter and causes the kernel to become rancid when kept for some length of time. There is also a porous core at the stem end, through which the worms easily find access when the rest of the shell is all that can be desired. This weakness at the stem end is without exception with this variety at the Pomona station. The kernel of the nut is all that can be desired. It is large, plump and fine flavored. The tree is a dwarf when grafted on the Eastern black walnut, but is very prolific for its size. The foliage is dense and stiff, affording better shade than that of the Santa Barbara walnut tree, which has drooping foliage. This feature is valuable for inland situations, where the walnut is liable to sunscald during the hot summer days.

Large-Fruited Præparturien is a nut almost identical with the Bijou, except that the tree has still more ample foliage and affords as near a perfect protection to the nuts from the sun as can, perhaps, ever be obtained through selection. The tree is much larger than that of the Bijou, but not so prolific. This variety blossoms late enough to be absolutely out of danger from frost. It is also late in ripening, which is against it. The nut has the same weaknesses as the above named variety. Both of these varieties of nuts have irregular shapes, which detract from their appearance. This is very noticeable when a quantity is seen at once.

The second generation Præparturien is somewhat of an improvement on the above two in one respect. The nuts are large, but of handsome and regular shape. It also has the weak spot at the stem end, which admits the worms and makes them poor keepers. It is a late bloomer and ripens late. The foliage is ample and, like the two above named varieties, has leaves that are heavy and stiff, shading the nuts much better than the Santa Barbara trees do.

All of the above varieties are more susceptible to the blight that attacks the nuts than is the Santa Barbara nut. The second generation Præparturien may be an exception, but we are not prepared to say so yet. Where the sun strikes these large nuts they burn much quicker than the smaller Santa Barbara. This is no doubt due to their being more succulent. They start later than the smaller nuts and soon overtake them in size. When the blight overtakes them, or the hot sun strikes them during this period, their destruction is rapid.

The Santa Barbara soft shell growing beside them produced 50% more nuts in pounds. There were more sunburned nuts than on the larger varieties, and less blight. The Santa Barbara trees are much larger than the other varieties named.

As far as we know, there is nothing superior to the last named variety for general culture. The new nut that originated at Placentia, and has been given that name, is said to be superior to the Santa Barbara soft shell. We cannot say as to this. It is said to be late enough in blooming to be safe from frost. It appears to be precocious, as we have seen the trees bearing when only one year old.

In selecting trees for planting, it is essential to success to secure trees that are budded from select trees. There is as much difference between individual trees grown from nuts as there is between fruit trees grown from seed.

### Apricots in Irrigated Alfalfa.

TO THE EDITOR:—In your last week's "Queries and Replies" I noticed the one about "Non-bearing Apricots." I have had some experience with apricots that would not bear, which might be of some profit to your readers. We had the ill luck of putting out that non-bearing apricot, the Moorpark, which would grow wood, but not fruit. These trees were in for eight years, but they did not pay. By luck rather than knowledge we put in alfalfa around the trees and flooded the land as you would alfalfa. The next year these trees began to bear good crops

of fruit every year for seven years—that is, seven tons of fruit to the acre and even double that amount some years. This takes a good deal of water, but it brings the fruit. E. S.

Cucamonga, San Bernardino county.

This statement may be very significant. On the face of it, it indicates that more water to promote summer and fall growth will tend to perfect fruit buds. Who else has testimony on that point or against it?

### Pineapples.

Our readers who may like to experiment with pineapples, although the fruit has been a disappointment except in a few strictly frostless places, will be interested to know that, according to a Farmers' Bulletin just issued by the Department of Agriculture, there are about 100 catalogued varieties. The principal ones—eighteen in number—are described. They are Abakka, large size, best quality; Antigua, Black, small size, best quality; Antigua, White, medium size, good quality; Black Jamaica, medium size, good quality; Black Prince, Blood, Crown Prince, Charlotte Rothschild, Egyptian Queen, Lord Carrington, Prince Albert, Porto Rico, Pernambuco, Red Spanish, Ripley Queen, Smooth Cayenne, Sugar Loaf and Enville.

The Red Spanish is the most extensively grown in the United States, and may be considered our standard variety for field culture. It is also grown under sheds, "but sheds should be planted to varieties that produce larger fruits that sell for a higher price, such as the Smooth Cayenne," says the author. "In the case of the Red Spanish the line of improvement will be in securing larger fruits and a better quality."

In regard to freezes, it is asserted that "little difference could be observed in the hardiness of the different varieties, other than that due to difference in size. The large plants were usually the least injured. Thus the Porto Rico, the largest variety grown, was probably the least injured. The Abakka and the Red Spanish probably come next in the order of size and consequent injury, but the difference is very slight."

The eighteen varieties listed by the Florida State Horticultural Society in 1901 are all of foreign origin. The report says: "The Red Spanish, Porto Rico, Abakka and Smooth Cayenne are grown most extensively for market. The Egyptian Queen, Ripley Queen, Blood, Pernambuco and Sugar Loaf are grown less extensively. \* \* \* In the numerous and expensive shedded pineries of Orange county and the west coast, which are cultivated on the intensive system, the Smooth Cayenne is planted most extensively."

### The Splitting of Oranges.

J. H. Reed of Riverside, a man of much experience and close observation, gives the Press the following comments on the splitting of the navel and the premature dropping of the fruit as encountered by many growers of the Washington Navel variety. He cites the fact that Mr. Newton B. Pierce, in charge of the Pacific Coast Laboratory at Santa Ana, Cal., says the dropping is caused by a specific fungus disease. That this disease was thoroughly investigated at Riverside and elsewhere in southern California six or seven years ago, and the facts given to the public.

Mr. Pierce says that the "malady was named the black rot of the Navel orange," and that "it is induced through the action of a new species of fungus, the spores of which find lodgment in the navel. It was suggested by the Department at that time that in cases where the trouble is of sufficient importance to warrant treatment, it may be prevented by applying suitable dry or liquid copper fungicides to the young fruit. It was further recommended that the fruit be frequently gathered and deeply buried, as the fungus finds such fruits a favorable situation for production of vast numbers of spores."

Though a somewhat careful reader of matters concerning the citrus fruit industry for the past ten years, this is the first he has known of such investigation being made. It certainly is a satisfaction to know that the cause of this trouble, which has called out so much discussion and so many different opinions among growers during the past half dozen years, has been passed upon by competent authority and practical remedies suggested, should the disease continue to increase.

SPLITTING.—The same writer also referred to splitting of oranges which might be expected to follow the excessive dropping, the cause of which also calls for investigation. This splitting trouble has followed, and to a far more serious degree than ever before.

"A prominent Redlands grower told me that the trouble was greater there than he had ever known it before; that he estimated the loss already in sight from this cause in his own orchard at not less than 10% of the crop. One of my neighbors just tells me that the loss in his own orchard will be fully that much. The trouble seems quite generally distributed."

MR. REED'S OBSERVATIONS.—"After giving the matter as careful study as a layman can without labor-

atory facilities, I am more fully convinced than ever that the cause will be found in some fungus disease, the spores of which find lodgment usually, but not always, in the navel of the seedless orange. I know that the generally accepted theory is that the trouble is purely mechanical, certain points giving way to internal pressure, because of some special weakness produced by some fertilizer, atmospheric effect or other local cause. I find conditions connected with the phenomenon quite unexplainable to me by this theory, which I will not go into here, further than to say in every instance that has come under my observation there is indication of disease in the rim of the navel where the check or crack commences, and usually in the flesh near, immediately after the crack opens, while neither skin nor flesh near cuts made with a knife in a perfectly healthy rim show signs of disease, long after the incisions are made. I should like very much to hear from orchardists or others who have given the matter careful study.

"Besides the scientific interest the matter naturally calls out, it seems to me of very practical interest. Already many trees begin to look spotted from the number of fruits prematurely colored, and I fear we have not yet seen the worst. On close examination, a larger number of fruits will be found yellowing about the rims of the navels, and slight checks started. These may not develop into splits, but most of them will be imperfect fruits. If it is true that the cause is fungus disease, it can be remedied.

"Mr. Pierce, the specialist, has been requested to investigate the matter. A package of the diseased or defective fruit has been forwarded to the Agricultural Department at Washington for examination.

"It may be all right this year to have our large crop depleted in this way, as it is being done pretty uniformly, but we know that these fungus diseases, when they have been allowed to get a foothold before attention has been given to them, have sometimes brought great destruction to deciduous fruits in the East."

### Prune Vinegar.

The Oregon Experiment Station, according to the Agriculturist, has been conducting an interesting set of experiments this season in curing prunes and utilizing waste prunes. A number of the mooted questions as to quick or slow drying, temperature for best results, etc., have been under consideration, and when the required analyses have all been made some valuable data will be made public. The most immediately satisfactory work was done in saving waste prunes. These prunes were dumped into a hopper and passed through rollers studded with nails, which crushes them, and were then dumped into a cheap watertight vat provided with a faucet to draw off the juice. Prof. Pernot introduced into the mass a pure culture of the desired fermentation. Active fermentation set in within a few hours. This released the juice, which flowed off through the action of gravity without the application of force. Three gallons of juice was obtained from each bushel of prunes. This juice contained 10% of alcohol. This will make vinegar containing 8% of acetic acid. As 4% of acetic acid is the standard strength, the vinegar can be diluted one-half. The actual results with the vinegar are, of course, yet to be worked out. The pure cultures used can be easily obtained from the Experiment Station at Corvallis. This is a remarkably cheap method of separating the juice from the pulp. After the juice is drawn off the pulp is fed to hogs. They eat it with relish.

### The Sugar Prune in Oregon.

Mr. S. D. Evans, Umpqua Ferry, writes to the Agriculturist concerning the Sugar prune! "I myself think it just what we want, as it will surely miss the September rains which the Italian always gets. The only drawback to it I see is that it may meet early frosts in blooming time. Burbank claims it is frost proof, and this may be true; and yet it may not be proof against a freeze such as we sometimes have here. I have two frost proof prunes—Clyman and Tragedy—which have never failed in six years to bear a heavy crop, and nearly always pass through a frost and sometimes quite a freeze. They both bloom ahead of the Sugar, or did last spring."

## FRUIT MARKETING.

### The Raisin Growers' Association.

The directors of the Association are again undertaking aggressive work to collect the growers under the lease plan. President Kearney has just issued to all interested circulars describing the plan in detail and urging them to sign the leases. The Hanford Journal says that raisins are arriving at the Association houses very rapidly, and those houses have all the goods they can handle. This is true in Fresno, as well as in Kings county, they are informed. Not only are Association members, who have been holding back their crops, now bringing them in, but many who were formerly outside the Association are signing Association contracts. The Chinese, who, we re-



gret to say, handle a considerable portion of the vineyard output of this county, are putting their crops into the Association now.

One of the directors, S. E. Biddle, says: "Everything looks good for the Association. Next year we will have a stronger organization than ever, and I believe that we will have 80% of the crop."

It is the general impression, continues the Journal, that about 3 cents will be realized by the growers this year for standard raisins. With the short crop, 4 cents, and perhaps 5 cents, could just as well have been obtained, but for the kick against Kearney and the Association. But the outside growers have learned the lesson that the Association can lower prices as well as it can keep them up, and it is certainly to be hoped that only one such lesson is necessary to teach them that in "union there is strength," and that the Association cannot always be expected, at much expense, to maintain an organization which "holds the umbrella" for them without their participating in any expense—only in the profits. The low price of raisins this year is hard on Association members, but the fight against outside raisin growers had to be made this year or next, and it is probably better that it should come now than next year. Victory certainly appears to be perching on the banner of the Association, and, although the battle caused a big slaughter of prices and a heavy loss of profits, the people of the raisin district—business people as well as farmers—will breathe easier, feeling confident that it means a continuance of prosperity and a renewal of good prices for raisins in this part of the San Joaquin valley for some years to come, at least.

### The Prune Situation at Bordeaux.

Special Consular Report received by the Pacific Commercial Museum of San Francisco, November 6, 1901.

By A. W. Tourgee, U. S. Consul at Bordeaux: It is an easy thing to charge a consul with knowing less about what he studies than others do of what they only guess about, but when one has the sworn invoices of exporters before him he may be said to know something about the prices paid.

The first invoice to the United States from Bordeaux of prunes this year was as follows:

36 fruit	106 francs	per 50 kilos.
40 "	86 "	" "
45 "	76 "	" "

This you will please note was for net fruit; the "bottles," "labels," "stoppers," "paper and packing," "shipping of petties" being separately charged and amounted to more than one-third of the invoice.

The 36 fruit, therefore, delivered f. o. b. sold for a little more than 25 cents a pound and the 40 and 45 sorts ranged at 16 and 20 cents. I cannot, of course, give you the names of the parties importing the fruit at these rates, but I may say to you that the very day my report was made, net prunes were shipped through this consulate to San Francisco at a cost of 23½ cents per pound net, while the packing charges, etc., amounted to more than one-half the price of the prunes themselves, so that the cost f. o. b. Bordeaux was more than 30 cents a pound.

I did not care to give these extreme prices, but it seems to me a thing very well worth considering by American growers that such prices are paid on large shipments for French prunes for American consumption. At the very time that they are quoted as expressing surprise and incredulity over a report very carefully studied and which reduced from one-third to one-half the actual prices reporting 16 to 19 cents per pound American purchasers were paying one-third more.

The real reason for their incredulity is that American prunes do not bring as high a price in the United States as the prunes of this region, the reason for which is chiefly due to three things: First, they are not carefully ripened. Second, they are not so carefully cured, and, third, they are not so attractively put up.

The manner in which the French prune is cured is one of the neatest and most delightful processes ever known in the preparation of fruit. The utmost care and skill, abundance of time and the most unremitting attention are given to the curing. As to the comparative merits of the prunes themselves I am not able to speak, because I never saw the California prunes in the raw state. My visits to that region have been made at other seasons of the year, but judging them from the samples of cured prunes here, it becomes at once evident that their market value will naturally be much less than that of the French prune until their quality is greatly improved.

I have received many inquiries for the "secret" of curing French prunes. I have no doubt there are certain particular methods of treatment, some of which may be secret with the parties curing and packing, but in my opinion the great "secret" consists in taking time and employing the utmost care in the various processes.

Even now, when all extraneous influences are over and the market is at its height, 40 fruits are selling in the country places at 14 cents a pound, that is 2 cents only lower than the rate which seems to have caused such horror and surprise among the San Francisco people on the 12th of September as opening prices, and these prices are for the naked prunes

at Miramont, at Prayssas, at Castel Moronsur-Lot, at Cancon or Agen, 50 to 80 miles from Bordeaux, so that the cost delivered on the quay at Bordeaux is to-day very little below that reported on September 10th. The smaller and less perfect fruit is coming into the market and is having some effect perhaps upon the general prices, but the large fruit, which constitutes a much greater portion of the crop than usual, is being held back, not so much by the dealers as by the producers, who have an abiding faith that higher prices may be thereby obtained.

The competition of the American prune for the making of preserves in English and German establishments is regarded as very important, but for use for which a large portion of the present crop is especially adapted, the competition of the American prune is not regarded seriously at all. If the French crop ran to small sizes and a considerable part of the fruit was imperfect, the American crop would practically fix the market value, but under present conditions the French prune of 1901 will have a high market value wherever the California crop may be, because it represents perfection as a sweetmeat.

WALNUT PRICES.—I see that you have a lot of walnut quotations from here. Not a walnut has been packed or sold of this year's crop in this district. The quotations given are of last year's walnuts, the sale of which to the United States has been very lively for a month or so. The extract referred to has escaped me, but the PACIFIC RURAL PRESS of October 5th has reached me and as it refers to the same thing you will know what is meant by it.

The foregoing special of Consul Tourgee to the Commercial Museum of this city is apparently in answer to some objections to his reports made by the trading interests in this city. We are evidently getting the truth through the consuls, in some cases at least, and the truth does not always please all interests. The reports on walnuts to which Mr. Tourgee refers were evidently made under the apprehension that reports were wanted at once, even in advance of the new crop. The pronoun "you" in his letter probably refers to the authorities of the Commercial Museum through which all these foreign reports are received.—Ed.

## THE FIELD.

### Beans in Ventura County.

It is probable that the great majority of people, even in southern California, says the Los Angeles Herald, have no comprehensive idea of the extent and value of the bean growing industry in Ventura and Santa Barbara counties. Here is the real land of the bean. The assessor's book show some 42,000 acres in Ventura county and 8000 acres in Santa Barbara county devoted to the industry, and there may be 2000 acres in the two divisions that are not turned in, making a total of 52,000 acres.

There is little more than half a crop this year. It will average ten sacks, or 800 pounds to the acre. The contracting price to the growers ranges from \$3.60 to \$4.20 per 100 pounds, averaging perhaps \$4. The market has been very strong of late, however, owing to the bean famine in the East, hovering about the top figure. At a moderate estimate the bean industry will bring the growers of Ventura and Santa Barbara counties \$1,500,000 this year.

A large proportion of the bean produce is of the Lima variety. The largest and best beans grow next to stalk, but this year, owing to the hot weather in August, the beans did not "set" well, and most of the beans are on the "runners." The best and biggest crops are secured by the aid of irrigation. About one-fourth of the crop in the two counties named was irrigated. An estimate of this year's product will run from 3500 pounds to the acre to 480 pounds, for the largest and smallest crops respectively. Individuals have exceeded the top figure named. One grower, named Willoughby, whose ranch is some 3 miles east of El Rio had 4200 pounds to the acre last year, but owing to the hot weather his crop will not average so high this season. If only a little over half a crop has been raised this year, what must be the possibilities of Ventura and Santa Barbara soil under more favorable conditions? It is probable, however, that the bean average will be considerably reduced next season, for the reason that a large portion of it will be sown to sugar beets, which are just now an even more profitable crop.

### Flax Growing in Solano County.

For the past three years certain farmers on the flat lands between Rio Vista and Denverton, says the Solano Republican, have been experimenting with the culture of flax. The ventures have proved so successful that the area of land devoted to it has been increased each season. This year there were 1000 acres of land sown to flax. The harvest has closed and the farmers have found it more profitable than wheat. The yield of seed ordinarily is about the same weight as the yield of wheat on the same

land, but this year conditions were in favor of wheat. Flax yielded from four to seven sacks per acre, the sacks weighing 125 pounds. This season's crop was sold before harvest to a firm in San Francisco for 2½ cents per pound, making an average return from the land of about \$40 per acre. Owing to the small extent of the industry here, no use has yet been made of the fiber; but, as the industry expands, this also will be used and the profits will be larger.

## SHEEP AND WOOL.

### Experiments With Sheep Feeding.

Those who are keeping small bands of sheep on the farm rather than the range plan will be interested in the results of an experiment at the Nebraska Experiment Station in which ten lots of lambs were kept upon different feeds. Alfalfa and sorghum hay were used as roughness, four lots being fed on sorghum and six lots on alfalfa hay. Three lots had a shed with protected yard attached, while seven lots had open yards with slight protection from a low shed some 25 feet to the north.

The lambs with shelter weighed an average of about fifty-six pounds each at the beginning of the experiment, while those in the open yards were slightly larger, weighing sixty-one pounds average.

Of the six lots on alfalfa, there were under shelter and three were in open yards, each lot under shelter being duplicated by a lot in the open yard.

Three different grain rations were fed to the lambs on alfalfa. Lots 1 and 4 received alfalfa and corn. Lots 2 and 5 received alfalfa and a grain ration of three-fourths corn and one-fourth oats. Lot 3 and 6 received alfalfa and a grain ration of three-fourths corn and one-fourth bran.

Lots 7, 8, 9 and 10 were fed sorghum hay and the following grain rations: Lot 7 received sorghum hay and corn. Lot 8 received sorghum hay and three-fourths corn with one-fourth oats. Lot 9 received sorghum hay and three-fourths corn with one-fourth bran. Lot 10 received sorghum hay and five-sixths corn with one-sixth oil meal.

The three lots under shelter on alfalfa and a grain ration made an average gain of 34.3 pounds in ninety-eight days.

The three lots in open yards on alfalfa and a grain ration made an average gain of 33.2 pounds in ninety-eight days.

The three lots in open yards on sorghum hay and grain rations containing corn, oats and bran, made an average gain of 20.7 pounds in ninety-eight days.

The one lot in open yard on sorghum hay and corn with one-sixth oil meal gained 26.7 pounds in ninety-eight days.

The six lots on alfalfa and grain made an average profit of \$0.72 per head.

The three lots on sorghum hay, corn, oats and bran made an average profit of \$0.31 per head.

The one lot on sorghum hay and five-sixths corn with one-sixth oil meal made an average gain of \$0.38 per head.

The season was favorable for gains, but the price of \$5 per 100 at which the lambs sold made the profit small.

## THE VINEYARD.

### Advice on Vine Planting.

When we decide to commence planting vines, says Prof. Husmann in the Napa Register, let us commence right—not in the old, slovenly way which so many followed during the time of the grape boom, from 1880 to 1885, when everybody rushed into grape growing with or without capital, trusting to the vineyards which they planted to reimburse them in a few years. They did not consider that the vines would be a continuous expense until they came to bearing age, and that they could not make a success of it without any knowledge, paying interest on their investments all the time, is self-evident. But now, after many years of trial, the situation is entirely changed. Those who have held out during all this trying time, and who have replanted with resistant stock, have now flourishing vineyards to show as the fruits of their exertions in the right direction. And which is the right direction? To me it seems to be that we should first get rid of the old idea that any location too poor to grow anything else will do for grapes; that slovenly preparation of soil will do; that the vine will help itself. We want depth of soil, deep enough for the roots to penetrate and draw moisture from below; and, if the soil is not naturally deep, it should be made so by sub-soiling and pulverizing. We have an abundance of soils here, especially on our northern hillsides, with loose subsoil. These may not need it, but the majority of our soils do. In soils underlain by hardpan (not the best soil for vines anyway), do not attempt to plant without plowing and subsoiling at least to the depth of 15 to 18 inches. This should be done in the fall or early winter, and, before planting, should be followed by another plowing to pulverize the surface—the deeper the better. That none but resistant vines should be planted is self-evident; but the selection of the different classes is another matter.



## RANGE INTERESTS.

### Mother Love in Range Cows.

One day as my wife and I were riding by a small bunch of stock on a Western cattle range, I said: "Now see how these animals will obey me." Then I addressed the cows: "All you cows whose calves are hidden away in the grass, please come forward when I give the signal," and I began a long, high-pitched bleating, the note of a calf in dire distress—"Baa-a-Baa Baa-a"—

and as I bawled out there was a great commotion. Some of the cows whose calves were with them snorted and looked about. Each calf ran to its mother, whereupon she became quiet; the steers tossed their heads, looked about suspiciously and snorted, but settled back to feed. Four cows, however, sniffed and looked quickly in our direction, and then, with heads and tails up and a great deal of angry action, came trotting towards us. "There," I said, "these four have had calves born within the last few days. The calves are not yet able to follow their mothers, so remain 'cached' in some sheltered hollow."

As the angry cows came nearer, we turned and rode off, but I kept on bleating and the cows continued to follow. We urged our horses to gallop. Three of the cows gave up the pursuit, but the fourth followed for nearly half a mile, part of the time at a run. Then I ceased bleating the distress note, and this last cow, the youngest of the four, hesitated, snorted, looked back then to the right hand, and leaving us she set off at a trot for a distant line of willows, where, undoubtedly, her newborn, probably first-born, calf was concealed, or as the herdsman say, "cached."

When the cow feels that her time has come, she leaves the herd and hides in some sheltered place till the calf is born. He arrives in the world nose first, and looks much like a tightly-bound-up little bundle, impossibly small, one might think, ever to grow into a huge bull, but his mother gets up presently and begins to lick him all over, generally uttering a sort of a hankering grunt, an expression of motherly love. Under the gentle massage of her tongue, the calf visibly expands. His hair fluffs out, his blood circulates more satisfactorily. After he has been massaged thoroughly from head to foot—and this may take an hour or two—he tries to get on his feet, hind legs first, but his mother's massage becomes so vigorous just then, that he is commonly licked off his feet more than once. But he gets stronger and visibly bigger every hour and soon succeeds in standing up, with his legs very widely spread.

At first, of course, the calf is unable to follow his mother. He is left in the hiding place, where he lies flat and still, while she goes off to graze, rarely very far away, and always ready to return at the appearance of danger. Usually, her choice of the hiding place is so good that the calf escapes all enemies, and gains strength to follow his mother about. But sometimes it happens that a watchful coyote marked a cow down in the thicket and knew by his nose or former experience that a little one was there to be brought into the world. He dare not go near the cow, but he does not go away, for he is in the chronic hungry state of the coyote, and here is a delicious feast in sight and easy reach, too, if only the mother makes the mistake of giving him a chance. He has a wholesome dread of her. While hanging about he licks his chops, and is always hopeful. Hours pass by and the coyote is getting dreadful hungry; but he hangs around, keeping out of sight, believing his time will surely come. It was mere accident that first betrayed to him the hiding place, and yet there is yet one other chance needed to bring the calf within his power, that is the absence of the mother. There is only one thing that can bring this about, and that is the remoteness of the water supply. Ere many hours pass the mother must go seek her daily drink. After glancing about keenly for foes, a glance which the coyote escapes by crouching, the mother, not without some misgivings, sets out across the plain to the watering place. The keen yellow eyes of the coyote kindle as he sees this, for he knows that at last his chance has come. When she is far in the offing, he quits his lurking place, keeping well out of sight, trotting along the hollow straight for the hiding place of the calf. The little fellow sees or hears this approach of what it instinctively knows for an enemy. It crouches closely, lying its head flat on the ground, and lies like a stone, showing how well the ancient lesson has been learned. But concealment is hopeless; the savage enemy knows the very spot in the thicket where his unprotected victim lies, and in a moment he bounds up from the grass and springs upon it. The calf realizes that its hiding place is no longer possible, it leaps to its shaky legs and bleats loudly for its mother.

"Baa, Baa, Baa, Baa," it cries as it vainly struggles to escape. In a moment the coyote has pulled it down. Other coyotes are likely to be near, and in a few moments they are tearing the warm, bloody meat from the tender bones. The cow can

hear a long way off the distressed cry of her calf, and will at once come tearing to save it. Indeed, a strange cow or steer would also come at the cry, and drive the coyote away. But the foe is a cunning one, he knows how to bide his time, and now there was none to interfere; the cow comes back only to find a few bones where she left her pink-nosed baby.

She is terribly distressed; for a time she runs about bawling in a peculiar, unmistakable way. There is in her bellow a tone of sorrow that all recognize. She runs to look at the remains. The head is usually left undevoured, and this she stares at and licks repeatedly, just as she did when it was alive. Then she will turn and walk away, looking back to see if it is not following her, and uttering a low moaning bellow at intervals. Any coyote she chances to see she pursues with murderous intent, but they can laugh at her attempts to catch them.

For some days she is in a very bad physical state; milk fever sets in in some form—the mother's craving for her little one is aggravated by her condition. She goes to every small calf she sees until near enough to smell it. Some cows at this time go away when they find the calf is not their own. Some will even give the unwelcome stranger a thrust with the horns, while other cows are disposed to squander the unclaimed affection on any little one, and gladly suckle it, and thus find both physical and mental comfort in mothering.

During the next few days she goes back many times to look and linger over the remains, but time does its work quickly with her. The first day she was there continually, the next the mother was at the tragic spot every hour or so, by the end of a week the head and bones have lost all semblance; their direct appeal is gone and their memory is fading. Nature has sent physical ease; the little one is forgotten; but from that time on the heart of the mother is ever liable to be stirred to fury by that high-pitched shrill "Baa," the bleat of a calf in terror of its life, and that was the bleat that I used that day to separate the mother cows from the rest of the herd.—Ernest Seton-Thompson in Breeders' Gazette.

## THE DAIRY.

### Ayrshires at Santa Barbara.

TO THE EDITOR:—I thought it might interest you to know that we have received the valuable young Ayrshire bull, Dudley of St. Anne's 7553, to head our small colony of Ayrshires at Santa Barbara. He was the winner of the first prize in a class of nineteen competitors at the Toronto, Canada, exhibition this fall. His sire, Lord Drumsue 7552 imp., was awarded the first prize in his class and the silver medal sweepstakes prize at the same exhibition. His dam, Kirsty Wallace of Aucharbrain 16653 imp., is one of the best of the five Ayrshire cows that made such a wonderful showing as economical butter producers at the Pan-American six months' milk test, in competition with the best of the butter breeds. This young bull was purchased for Mr. A. W. Canfield from the noted show herd of Robert Reford, near Montreal, and one of Mr. Reford's best heifers has been ordered for Mr. Canfield. We will now be able to show some of the choicest specimens of both the Canadian and the New England type of Ayrshires. The interest in Ayrshires seems to be on the increase in this State. Two young bulls have been sold to go to Santa Cruz, Cal. Our heifers are all doing exceedingly well and show themselves adapted to the conditions of this locality.

Santa Barbara.

JAS. H. HESTER, V. S.

### Intensive Alfalfa Dairying.

S. M. Gilliam gives the Visalia Times a catechetical interview as to alfalfa dairying, and the Times thinks he is probably better qualified to speak than any one now engaged in that business in that section of California. Mr. Gilliam hires all his work done, being physically unable to do any labor of any sort.

"Are you making any money out of your cows this year?" Mr. Gilliam was asked.

"I am," he replied. "My cows are averaging me \$4.50 per month this year."

"How many cows can be supplied with feed on an acre of alfalfa?"

"That will depend on the way the alfalfa is handled and on the character of the land. On such land as I have I can keep three cows to the acre. I cut and feed the alfalfa, and that is the only business way to do it. There is no sense in permitting cows to trample over the ground and grind out the feed."

"How much does it cost you to cut the alfalfa, feed it to the cows, milk them, pay the taxes, and every other incidental expense connected with the business?"

"With me I have to hire all of my work done, and it costs me \$40 per cow per annum. This includes wages, taxes and all other expenses. Some of the dairymen estimate this expense as low as \$25 per cow, but the way I am situated it costs me \$40. This

would make the account stand about this way: Gross receipts from three cows on one acre of alfalfa per annum, \$162. Total expenses, \$120. In addition to this, I have three calves and three pigs raised on the skimmed milk that are worth \$20 net. This leaves a net profit on each acre of alfalfa, counting all possible expenses, of \$62 per acre. In my estimate I allow \$30 per month for milkers. The cows in this neighborhood are gradually being much improved. I have one cow that gives sixty-three pounds of milk per day. I have another I have been milking since last May that averages forty pounds per day. It is just as easy to keep a good cow as a poor one, and dairymen are fast learning that this is true. The proper way to build up the dairy business here is to have the land held in 10 and 20-acre tracts. That is as much land as one man can take care of. The best plan is to have but ten acres. On that amount of land one man could care for twenty cows easily, take care of the calves and pigs, grow a garden and fruit, and make \$125 per month. In that way he would be his own boss, could stay at home every night, and still have enough time to loaf around town and spit on the sidewalks. He would not have to hire any help to run this sort of place. Visalia will make a mistake if a creamery is not started here. Next year twice as much cream will be brought to the skimming station as was supplied this year. We are just learning the profit there is in the business and there is money in making the butter."

### The Dairy Bureau.

At a special meeting in this city the Dairy Bureau has reorganized for the coming year's work. Mr. John A. Bliss was elected chairman and Mr. J. M. Thomas secretary. The following are the present members of the Bureau and their personal lines of dairy activity: Dr. Thomas Flint is extensively interested in agricultural lines, and has one of the largest dairies and cheese factories in San Benito county. Mr. John A. Bliss is in the dairy and creamery business in Oakland. Formerly he confined himself to the milk business, but during the last several years has branched out largely in the creamery business, the product of his plant being sold at retail in Oakland. Mr. Bliss represented his district during the last two terms in the Assembly. Mr. John Flannery is engaged in the dairy business in Santa Clara county. He has a large herd of dairy cows and retails milk in the city of San Jose. The new secretary and agent, Mr. Thomas, is a pioneer Californian, and been for years engaged in lumbering and agricultural business, including dairying. At present he is in the orchard business in southern California. For four years he has been connected with the Los Angeles County Horticultural Commission.

### Transfers of Jersey Cattle.

TO THE EDITOR:—The Pacific Coast Jersey Cattle Club reports the following recent transfers of registered stock:

BULLS.—Sarno of Marin 689, The Mailliard Estate to J. W. Stetson, San Francisco; King of Castle Rock 694, H. West to Mrs. E. R. Huntington, Castle Rock, Wash.; Sam of Hillyard 696, John Sampson to D. S. Hunt, Hillyard, Wash.; Opal's Hobson 697, H. West to Fred Briggs, Houlton, Or.; Thomas H. 698, E. N. Hall to M. Tillery, Parker, Or.

COWS.—Madrina 1620, The Mailliard Estate to J. W. Stetson, San Francisco; Coyne's Dixie Pogis 1652, T. A. Winter to L. J. Walford, Colville, Wash.; Coyne's Dixie Pogis 1652, L. J. Walford to W. E. S. Coyne, Spokane, Wash.; Princess Maud 1654, John Sampson to D. S. Hunt, Hillyard, Wash.; Soto of Two Rock 1655 and Tartar 1656, The Mailliard Estate to W. D. Honx, Berkeley, Cal.

JOSEPH MAILLIARD, Secretary.

San Francisco, Nov. 1.

CALIFORNIA LEMONS are winning new victories from New York analysts. As compared with the test made in November of last year, this year's analysis is more favorable. The percentage of waste matter, consisting of pulp, seeds and rind, last year was 64%; this year it is 58.65%, according to the last analysis. The percentage of juice was 36 last year, and this year it is 41.25. The citric acid, equivalent to crystallized citric acid, last year was 8.23 ounces per United States wine gallon; this year it is 9.21 ounces per United States wine gallon. These accurate determinations are necessary, because importers cannot stop saying evil things about the California products. Such facts as the above get between their teeth and they cannot talk so fluently.

SINCE the honey yield of the extreme south has slackened because of the dry years, the San Joaquin has come forward into the gap with a growing output of honey on a basis of irrigated alfalfa. Just as we write there comes a telegram of a shipment of six carloads of honey from Visalia, and a probable total for the season of fifteen carloads from the county of Tulare alone.



## Agricultural Review.

### ALAMEDA.

**SUGAR BEETS IN EXCESSIVE SUPPLY.**—Oakland Enquirer: The large crop of beets in the vicinity of Pleasanton makes it evident that a factory would be a good thing at that place. The factory at Alvarado is unable to handle the crop as fast as it should be harvested to save all the beets before the heavy rains.

### AMADOR.

**FEW BEEF CATTLE LEFT.**—Lakeview Examiner: Joe Howard, of Silver Lake, started recently for Lost river, Klamath county, with 600 head of beef cattle. He will feed at Lost river before driving to the river to sell. About all of the other beef of Silver Lake have been sold. The two and three-year-old steers brought 6½ and the cows 5½ cents.

### FRESNO.

**RAISIN MATTERS.**—Fresno Republican: Yesterday was a busy day in the office of the California Raisin Growers' Association. Over 400 checks in payment on account for raisins were given out over the counter. The grower this year is advanced 2½c on goods in the sweatbox, and does not have to wait until the deliveries are stemmed, as heretofore. The daily payments now run from \$50,000 to \$70,000. While the amount advanced is not as large as last year, still raisins are coming in so fast that the volume of money being paid out this season is not far short of that of the corresponding period a year ago. There is little hope of the prices this year being advanced. In fact, a director, in speaking of the matter, said the outsiders were underselling the Association as it is; not only that, but the outsiders are cutting under one another.

### GLENN.

**ORANGES AT ORLAND.**—Willows Journal: At Orland, where the climatic conditions are similar to those of Palermo, oranges are ripening rapidly and the number now on the trees ready for shipment prove conclusively that, with a larger acreage of trees, oranges would be sent out of here during the latter part of October. The trees here are all in excellent condition, healthy, vigorous and loaded with fruit of superb quality, many of the groves more than doubling their product of last season.

### KINGS.

**MONEY IN DAIRY BUSINESS.**—Lemoore Leader: Mr. Mattos, who milked thirty-eight cows last month and delivered the milk to the Lemoore station of the Kings County Creamery, has received a check for \$247.76 as his proceeds from the milk of his thirty-eight cows, which is an average of \$6.52 per cow. This is a good average of the money to be made from the dairy business in Kings county, where feed is cheap.

### LOS ANGELES.

**SMALL ORANGE CROP.**—Los Angeles, November 10.—Careful and conservative estimates of the orange crop of southern California for the season 1901-2 indicate that it will be from 15% to 20% less than that of last year, and, with normal climatic conditions, the fruit will be of excellent quality. There is the usual variance in these estimates. However, an optimistic view from Riverside county is that the crop will exceed that of last season. In the Redlands district it is thought the decrease will be from 10% to 20%. The territories of Pomona, Ontario, Azusa and Covina indicate a deficit of nearly one-third, while some of the growers in the vicinity of Ontario are of the opinion that their yield will not be more than half of what it was last season. In Orange county it is said there will be a decrease of about 25%, as compared with the previous crop, while San Diego county's shipments will equal those of last year.

**GOOD RETURNS FOR ORANGES.**—Covina Argus: The Glendora Citrus Association has just received returns on a car of Washington navels shipped to San Francisco by them October 19th, which was probably the highest priced car of oranges ever shipped out of this valley. The car nets the sum of \$1465.28 f. o. b., which will mean better than \$3 per box net to the growers.

### ORANGE.

**FATTENING CATTLE ON REFUSE MOLASSES.**—Los Alamitos correspondence Anaheim Gazette: A large herd of cattle will be fed at the cattle stock yards this winter, and experiments are being made in the use of refuse molasses, with the best results. It has been considered for some time to be an exceptionally good feed for swine, producing as good pork as though grain fed, but Fuller & Martin are the first to attempt its use in fattening

cattle. The method is to add it to the feed of pulp after it is put into the troughs. The outcome will be watched with a great deal of interest, as it is a very cheap and nutritious food.

**THE BEET CROP.**—Los Alamitos correspondence Anaheim Gazette: The recent rainfall here of about 1½ inch had the effect of settling the dust, but did not interfere seriously with the work of harvesting beets now in the field. Teams were laid off but two days, and now delivery is proceeding at full blast. Every available pair of horses is brought into use in plowing out the remaining acreage of beets, and thus the injury, if any, resulting from the rainfall will be reduced to a minimum. This is almost a duplicate of the 1897 experience, and the harvest is advanced to about the same stage as then. The delivery thus far is 54,000 tons. The sugar content was 17% and above the whole season through, and purity was considerably above 80%.

**PROLIFIC PEANUT VINE.**—Los Angeles Express: R. H. Sanborn of this city has on exhibition a peanut plant on which 500 nuts were grown. The plant is a specimen selected from a twenty-acre patch owned by Mr. Sanborn at Tustin. He has six rows planted between his trees there, which are 50 feet apart, and a phenomenal yield appears probable.

### RIVERSIDE.

**HEAVY OLIVE CROP.**—Elsinore Press: The olive crop of Elsinore and Wildomar valleys is very fine this year. The young orchard of J. R. White at Wildomar will produce twenty-five tons of olives this season, Nelson Ambrose will have about six tons, R. C. Dickson four tons and there are numerous smaller lots there. Charles Leech, on his ranch at the foot of the mountains at the southeast corner of Elsinore valley, has a good-sized crop of olives. The largest olive orchard in Elsinore is on C. H. Alber's Lakeland ranch, where there are 5000 trees, most of which are four years old and bearing lightly. The five-year-old trees are heavily fruited. J. C. Ramsdale, foreman of the ranch, will pickle 2000 gallons of olives this year. The varieties are Mission, Manzanillo and Colombelle—mostly the first two.

### SAN JOAQUIN.

**LAST GRAPE SHIPMENT FOR THE SEASON.**—Lodi Sentinel, Nov. 9: The last car of table grapes for this season will be shipped to the Eastern market this evening from the shed of the Producers' Fruit Company. Some express shipments will be made, but they will be few.

### SAN LUIS OBISPO.

**DAMAGE TO BEAN CROP LIGHT.**—San Luis Obispo Tribune: The damage to the bean crop will prove much less than was at first expected. It was supposed that the recent heavy rains did great damage to the unharvested bean crop, and it was so reported. This undoubtedly would have been the case had the weather conditions immediately following not turned out extremely favorable. Had damp, cloudy, foggy weather prevailed on the coast, the loss to the crop would have been extremely heavy. But with favorable weather conditions, threshing was not delayed very long and reports from Arroyo Grande and Guadalupe indicate but a small loss.

**WALNUT GROWING.**—San Luis Obispo Tribune: John H. Thompson has a thirty-acre grove of walnut trees which this year will yield from twelve to fifteen tons of nuts. The trees range in age from ten to twelve years and are all in a flourishing condition. There are twenty-eight trees on an acre, and Mr. Thompson would not sell the tract for less than \$1000 an acre. The trees are all seedlings. In 1899 he secured from them three tons of nuts; in 1900 the crop figured up five tons, and this year it will probably reach fifteen tons.

**SAN MIGUEL CANYON APPLES.**—San Luis Obispo Tribune: Apples from the San Miguel canyon district, notably Bellflowers and White Winter Pearmain, are making an excellent showing this year. The Pearmain are large, firm and of good shape and color, and the Bellflowers show a high percentage of clean stock.

### SANTA BARBARA.

**LOS OLIVOS GRAIN.**—Santa Ynez Argus: Mr. Sawdey, the station agent at Los Olivos, estimates that the receipt of grain at the warehouse at that point this season will amount to fully 100,000 sacks. A good deal of grain from this valley has also been hauled to Lompoc and Gaviota landing.

### SANTA CLARA.

**WINE AND GRAPES.**—San Jose Mercury: Grapes are generally harvested. The late crop of table grapes is now ready to be shipped and will be soon marketed. Wine is firm and promises to be higher.

At Porter Creek David Sharp sold 63½ tons of wine grapes for \$24.50 per ton, the product of seventeen acres. John Shapique & Co. will have 40,000 gallons from the Sharp ranch. The Wehner vineyard of Santa Clara county will produce over 200,000 gallons of high-grade wine this year.

**MOUNTAIN LIONS CARRYING OFF LIVE STOCK.**—San Jose Mercury: Mountain lions have been terrorizing the district surrounding Hidden Villa, near the Arnold ranch, in the mountains west of this city, for more than a month past. There is a male and a female lion and a nest of cubs. They have been seen several times by the ranchers and hunting parties have gone out after them, but have never been able to get a shot at them. The lions have been making inroads into the live stock of residents in this district. Pigs and goats and other small animals have been killed and carried away, and they have even become so bold as to kill and devour a colt belonging to Rancher Singles. Heretofore a large number of deer have been found in this district, but they have all disappeared, and the farmers claim that they have been chased out of the hills by the lions.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian: Eastern apple shipments for the past week amounted to ninety-two carloads, making a total of 589 carloads for the season.—The Bellefleurs which are coming in from the orchards south of town promise to be late keepers. They are very firm, heavy and well colored.—There are yet quite a lot of Bellefleurs to pick. The crop is much larger than was first estimated.

### SONOMA.

**A SEEDLESS APPLE.**—Petaluma Courier: Rolla Andrews of Two Rock, who has been experimenting for some years to produce a seedless apple, has succeeded so far in producing an apple that has but a small rudimentary core and no seed. The end of the apple is hollow. In blooming the buds have no petals. Mr. Andrews thinks if he gets an apple without seed he will be able to fool the worms, and get an apple that a man can eat in the dark.

**THIS YEAR'S GLEN ELLEN VINTAGE.**—Santa Rosa Press-Democrat: A Glen Ellen correspondent says: Joshua Chauvet has made 100,000 gallons of wine at his winery there this season; Frank Lemoine 25,000 gallons, Schieck Brothers 10,000, Julius Wegner 10,000 gallons. Chauvet estimates he made 300,000 gallons of wine at the Santa Rosa winery. He reports this year's wine to be of better quality than last. Mr. Chauvet will also make about 2000 gallons of brandy.

**ORGANIZING A JERSEY STOCK ASSOCIATION.**—Petaluma Courier: There was a meeting of the farmers of this vicinity at Two Rock Grange hall on November 15th, for the purpose of organizing a Sonoma County Jersey Stock Breeders' Association. A large number of interested cattle raisers were in attendance.

**SOME BIG BEETS.**—Petaluma Argus: In the window of Brainerd & Veale are three large beets of the Mangel Wurzel variety, grown on the John Offutt ranch, on Sonoma mountain. The largest one measures 2½ feet long, 10 inches in diameter and weighs forty pounds.

### SUTTER.

**GRAIN SHIPPED IN BULK.**—Sutter County Farmer: Horst Bros. shipped a carload of barley to Chicago last week, loading it loose in the car instead of in sacks. This method is common in the East, but not so here, but may become popular, as it saves quite a sack bill. With sacks at 8c quite a sum is cut off the crop profit.

**BEAN CROP GOOD.**—Sutter County Farmer: Ira H. Wood was over from District 70 Monday and reports the bean crop in that section very good and the harvest about over. The recent rain did but very little damage. Mr. Wood's land yielded about thirty-five sacks per acre, the sacks weighing ninety pounds each. He refused an offer of \$2.57½ per cental, as the bean market is strong. Reports from other localities along the rivers and sloughs give the yield on beans about the

same as the above, which makes a very profitable crop.

**BIG YIELD OF PEACHES.**—Giblin Bros. of Sutter county, whose peach land is close to the Feather river and on the west side, obtained from 4 acres ninety-six tons, or sixteen tons of fruit to the acre.

**A NEW WORM IN THE ALMONDS.**—Sutter County Farmer: The almond growers of this vicinity are investigating a new pest in their orchards. They find evidences this season of a worm in the nuts. In some other localities of the State this appeared last year, but little was thought about it. The proportion of the nuts affected is very small, but it would be well to see that it is eradicated from the orchards altogether. We understand that where the orchards were irrigated this season there were no signs of any worms.

### TEHAMA.

**INCREASE IN SUGAR BEET ACREAGE.**—Chico Enterprise: T. F. Rinehart has a contract for the erection of a beet sugar factory at Thomas creek, about 4 miles from Tehama, for the Alvarado Sugar Co. The erection of this plant will entail an outlay of about \$400,000. It is reported that the company has secured about 15,000 acres of land, all of which can be irrigated. Work on the building will be commenced very soon.

### TULARE.

**HEAVY ORANGE CROP.**—Lindsay Gazette: Owing to the largely increased quantity of oranges this season over the past, enough experienced orange packers to handle the fruit of the Porterville, Exeter and Lindsay districts will be hard to obtain. George T. Frost of Exeter is finding it difficult to obtain the number required to pack the fruit of the Bonnie Brae Packing Co., and is offering good inducements for 100 packers. New beginners will undoubtedly be given an opportunity to learn orange packing this season.

**ABANDONING GRAIN GROWING.**—Tulare Register: We have it from one who has been about the country a great deal that the wheat growers are pretty thoroughly discouraged, and that at least one-eighth of them—and perhaps a larger percentage—will seed no grain this year. They find that, whichever way they turn, they are "up against it," as the saying is, and are given the short end of every bargain. By virtue of the "big four" controlling all the shipping available for carrying the wheat to market, they have been able to fix prices as they pleased, and have allowed the men who sweat and fret to produce the grain so poor a return that they are seeking some other means of earning a livelihood for themselves and their families, and thousands of acres of wheat land will go back to grass. Some are going into the stock business, others are seeking plots of irrigated land, and still others are working for wages with their teams wherever they can find a job to work at. It looks as though the "big four" were killing the geese that have been laying the golden eggs for them.

### YUBA.

**HEAVY YIELD OF FRUIT.**—Oroville Register: G. W. Hutchins of this county tells us that from 200 trees of the Salway peaches, covering perhaps a trifle over two acres, he obtained this season 31 tons of peaches, or 15½ tons to the acre. His trees are near the east bank of Feather river and 8 miles above Marysville.

**BEAN GROWERS DOING WELL.**—Marysville Appeal, Nov. 11: The bean growers are having a good run of luck this year as compared with the ordinary season. The late fall and warm weather has operated materially to their advantage in harvesting and threshing their crops, while the prices are much more satisfactory this year than of recent seasons, ranging from \$2.50 per cental upwards, as against about \$1.75 in years past. The J. R. Garrett Co. purchased yesterday from Sacramento river growers 1800 sacks of this year's bean crop for delivery this week, and state that a ready market is at hand for the entire output of this section.

## BLACK LEG ...VACCINE.

During the past two years our vaccines have been used on several thousand head of cattle in the worst infested districts of California, and with the best of results, giving entire satisfaction and proving an exceedingly profitable investment to the stock owner.

Every lot is tested and found reliable before a single dose is put on the market.

Write for literature and testimonials.

The Cutter Analytic Laboratory,  
Bacteriological Dept. FRESNO, CAL.

### Catarrh Cannot be Cured

With LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.

F. J. CHENEY & CO., Props., Toledo, O.  
Sold by druggists, price 75c  
Hall's Family Pills are the best.



## THE HOME CIRCLE.

## Sorrow.

An angel of God to two women came  
Saying, "What will ye ask in the Father's  
name  
When at last ye enter the gates of heaven?  
For whatever ye ask, ye shall be given."  
White with shedding of tears, one raised  
her face,  
Stiff set in the furrows which sorrows  
trace,  
And she said, "On earth I have had to  
quaff  
The cup of grief—in heaven let me laugh."

In pity he turned to the other then—  
To a woman with eyes which held no pain,  
Whose sunny face was a message of cheer  
To lives which had else been sadly drear;  
With lips ever ready for laugh or jest,  
Denying the anguish which no one guessed,  
And she answered the angel, "When I die  
God grant me in heaven a place to cry!"

—M. T. Maltby.

## Man and His Shoes.

How much a man is like old shoes!  
For instance, both a sole may lose;  
Both have been tanned, both are made  
tight  
By cobblers; both get left and right,  
Both need a mate to be complete,  
And both are made to go on feet.  
They both need healing; oft are sold,  
And both in time all turn to mould.  
With shoes the last is first; with men  
The first shall be last; and when  
The shoes wear out, they're mended new.  
When men wear out they're mended dead too;  
They both are trod upon, and both  
Will tread on others, nothing loath.  
Both have their ties, and both incline,  
When polished, in the world to shine;  
And both peg out—now would you choose  
To be a man or be his shoes?

—N. O. Picayune.

## The Ruse That Failed.

It would be difficult to find a more affectionate couple in any household than Mr. and Mrs. Tremain. On only one little point did they ever differ. Mrs. Tremain liked her husband to spend his evenings at home; but, to Tremain, a game of billiards, a smoking concert, and such-like things were pastimes he had an idea he could not live without. So, in order to make matters go happy and smoothly, he was tempted to invent a plausible excuse for his absence when at these forbidden pursuits. It was always a case of his being called away to render some kind service to an imaginary old school friend, John Smith.

Poor old joker, if he had only foreseen the plight this original little notion would ultimately land him in he would never have done it. For it ended in something terrible, as all wicked things do.

"You are late, Tom," said Mrs. Tremain to him as he entered the hall one afternoon. "You promised to be back in time to take me to mother's for tea."

"I'm awfully sorry, Ada, dear," answered Tremain. "It was quite unavoidable. I er—I met my friend Smith, and he kept me."

"I am beginning to think you care more for Smith than you do for me," replied Ada, in a hurt tone.

"Nonsense, my dear; how could I?" "Well, why don't you bring him here sometimes to spend the evening with us, instead of always visiting him? I don't even know where he lives."

"Just so; but he lives so far away—the other side of London—in Bloomsbury," floundered Tremain. "And there's another thing, too, he is so bashful; he never goes out to see anybody. Why, this very day, at three o'clock, when I saw him last, I said to him, 'John, why don't you come to my place and see my pretty little wife? I should so much like to introduce you.' But he replied that pretty women made him more nervous than any other sort. 'Now,' said he, 'if you could conscientiously say your wife was a regular ugly virago I would not mind venturing.' But how could I tell him such a gigantic falsehood, dear?" asked Tremain, with fervor.

"Well, love," answered Mrs. Tre-

main, much soothed, "you had better hurry to get dressed. Mother will be expecting us; and you know what a fuss she makes when we are late."

"I will," cried Tremain with alacrity. He was skipping upstairs when his wife called to him from the dining-room. He rejoined her there.

"John," she said, "here's a letter for you. I see it is marked important. I had forgotten it."

Tremain opened the envelope and read:

"My dear Tremain—Watson and Scott have promised to call round at my rooms to-night for a quiet rubber of whist. I rely upon you making the four, and shall take no excuses. If you have made any arrangement with your wife, tell her your friend Smith is seriously ill—good old bogey Smith. When I get married I think I'll try the Smith ruse myself. Yours sincerely,  
"HERBERT WYNDHAM."

"When did this letter come, Ada?" queried Tremain.

"About an hour ago," she replied. "I'm so sorry to tell you," faltered Tremain, "that I find by this letter that I shall be unable to go with you to—our dear mother's."

"Why?" inquired Mrs. Tremain, with surprise.

"Poor Smith," exclaimed Tremain.

"What's wrong with him now?" asked Mrs. Tremain.

"He's very ill—I must go to him at once!"

"Then I suppose I am to be again sacrificed. It is always your friend Smith. I begin to think you love him more than you do me."

"What do you say? I love him more than I do you? I hate him. I feel I could kill him for constantly taking me from your side. But—you see—er—Smith's departed dad was very kind to me. So I cannot do less, can I, dear?"

"You can't, Tom," replied his generous-hearted wife, "and I insist on your going."

"That is very good of you, dear," exclaimed Mr. Tremain, highly elated; "I will rush off at once."

"And," continued Mrs. Tremain, "I will go with you to help you nurse him—his father was so kind to you, I feel I owe a duty to his son. Dear me, what's the matter with you? You look positively ill."

Mr. Tremain not only looked ill, but he felt ill. Her unexpected desire to accompany him dazed his brain.

"You must stop at home, Tom," continued she. "Give me your friend's address; I'll go and nurse him myself."

"Impossible," gasped Tremain, "he's a bachelor—lives alone—people will talk propriety, my love; propriety."

"Propriety, fiddlesticks," answered Mrs. Tremain. "Who should tend the sick but a woman. A suffering man needs a woman's care. You stay at home, I'll nurse your friend."

"I would not have you dim your bright eyes by a vigil in a sick room for worlds," exclaimed the horrified Tremain.

"It will be a labor of love," replied Mrs. Tremain, "and as for my eyes, how could they be better employed than in watching the sick?"

"Impossible, dearest. For I must tell you that Smith is suffering from delirium tremens, and I—"

"You said it was consumption yesterday," interrupted Mrs. Tremain.

"No, dear. No, dear. Delirium tremens; and during his attacks he has the most objectionable habit of mistaking women for serpents. It is too horrible for words. When we lived together in lodgings he once tried to shoot the housemaid when she brought in my dinner one day, and, finding he had missed her, he hurled the hot roast leg of mutton at her. It was a most painful sight."

"Are you sure you are speaking the truth?" put in Mrs. Tremain, quietly.

"My dear," answered Mr. Tremain, "have I ever told you a falsehood?"

"I—I," answered Mrs. Tremain, but she got no further than this when Mr. Tremain cut her short by exclaiming:

"You doubt me? You shall come with me—but, if anything happens to you, remember, I warned you."

Tremain trusted that, by saying this,

his wife would draw back, but when she answered she would even risk her life to benefit any fellow-creature his hopes were dashed to the ground. What was he to do? To take her was impossible, for he did not know where it was he had to take her to; and he had now gone on romancing so far that, for a moment, he was in a quandary. At last he said:

"Perhaps, after all, it would be better for us both if I got somebody else to nurse Smith. It would be so dangerous. Something might happen to you dear, and I omitted to mention that, by a singular piece of good luck, my friend Smith lives next door to a Male Nursing Institution. I will write there at once for a nurse to be sent to him."

He hurried out of the room with a conscience green with horror at the plight he was in, which was such that, in his excitement, he quite forgot to pocket Wyndham's letter he had left on the table.

Mrs. Tremain picked it up and read it.

After doing this she walked several times round the room in a dramatic way, and, feeling no better, she sat down and took up the evening newspaper to quiet herself. She caught sight of the following paragraph:

"SHOCKING MURDER IN BLOOMSBURY."

"Great excitement was created this afternoon in the Bloomsbury district, by the discovery of a very terrible crime. The victim was a Mr. John Smith, an eccentric character who lived alone. The person known to be with the deceased was a dark, tall man. They were seen together at about three o'clock. Suspicion points to him. At present he is still at large."

"What an extraordinary coincidence," exclaimed Ada. "I now feel quite calm again. Likewise happy, for I will now teach my dear Tom a lesson which will bring him back early to tea every night for the remaining term of his natural life."

Here there re-entered Tremain, looking innocent and radiant.

"Tom, my love, did you say your friend's name was John Smith?" she asked.

"Ye-es," replied Tom.

"And I think you said he lived in Bloomsbury—did you not?"

"Ye-es."

"And he lived alone?"

"Yes."

"He has been murdered."

"Murdered?" exclaimed Tom.

"Yes, brutally murdered! You may well look scared."

"My friend Smith murdered—incredible! You are joking," cried Tom.

"I am perfectly serious."

"How do you know?"

"From an unimpeachable authority."

"Then I must go at once and see about it. What a singular and painful fatality it is that always something happens to prevent me from accompanying you whenever we are booked to visit your dear mother," declared the incorrigible Tom.

"I would not advise you to go," replied Ada sternly, "for if you do you will find the police are looking for you."

"Me?"

"Yes; the evidence points to you as his murderer."

"What on earth do you mean?" said Tom, laughing.

"You are tall, I believe," said Ada, sternly.

"Well?"

"Your hair is black."

"Well," said Tom, bewildered.

"You left him at three o'clock this afternoon."

"Ye-es."

"And you are at present at large."

"Ye-es. But look here, Ada, where does the humor of this come in? I confess I want to know."

"You shall know! Read this," said she, in freezing tones, handing him the paper.

Tom read it.

"This is extraordinary," he faltered. "I agree with you," she replied. "It is clear that I have but one course to pursue, and that is to send for the police."

Tom was now shaking violently.

"You can't mean what you say, Ada,

dear," he gasped, going toward her.

"Away from me, murderer!" she cried, with horror.

"Surely, Ada, dear, you don't believe me capable of such a crime?"

"Oh, if I only could believe you? But the evidence against you is too black. You yourself just now informed me you hated and felt you could kill him!"

"Oh, if I had only said Jones!" exclaimed Tom to himself, bitterly, "Ada, don't be a—er—don't wreck our happiness. Think that if I were really a murderer the finger of scorn would be pointed at you; you would be called a murderer's wife!" He looked at her askant. For a moment he thought that he might congratulate himself with the hope that he might not have to own up about Smith after all.

But this aspiration was instantly dashed to the ground by Ada's next remark.

"You don't know me," said she with fire. "I care nothing for the world; it may call me a murderer's wife, but justice shall be done."

Poor Tom was now on his knees. "Ada—Ada—think of our love," he implored.

"I love a murderer! Ask me something that's possible!"

"But, Ada," broke in Tom, "you can't mean that."

"Nevertheless, I am afraid it is going to be done," interrupted Ada, with a sly side smile.

"Alas! it must all come out," moaned Tom to himself, desperately. At last he managed to articulate: "Ada, I could not have murdered my friend Smith—because he never existed."

"Just so. That is what I learned by the letter you kindly left on the table for me to read."

"Then you knew it all the while? Was that kind to me?" exclaimed Tom, much hurt.

"Was it kind to me to ever have invented him?"

"No, it was not; but, it has disgusted me forever from ever seeking pleasure again anywhere else but by your side, will you forgive me?"

"On those terms, with all my heart."

—Gaspard George.

THEY were sitting on the sandy beach, and no word had been spoken by either for a full minute.

"You doubt me!" he at length exclaimed. "Have I not told you over and over again that I love you, and you only; and did I ever tell you an untruth, Katherine?"

"I would that I could have absolute faith in you," she replied, stifling a sob, "but I heard you tell uncle that you once caught a brook trout that weighed three pounds and six ounces." And the tears flowed down her fair young face, while he tapped the sand with his foot and solemnly gazed o'er the wide blue sea.—London Answers.

JACK—"How did you come out on that bulldog pup you bought?"

DICK—"Lost over one hundred per cent on the transaction."

JACK—"Oh, I guess not! One hundred per cent is all you can possibly lose."

DICK—"Think so, do you? Well, I paid ten dollars for the pup, and then I had to give a boy one dollar to take him out and drown him. If that isn't one hundred and ten per cent loss, I'd like to know what you call it."—New York Sun.

POLICEMAN—"Look here, my friend, the neighbors tell me that you beat your wife every day at about this time, and I have called to tell you that it has got to stop."

Surprised citizen—"Beat my wife! Why, what in the world—oh, I know what you mean; that's my oldest daughter learning to sing!"—Louisville Journal.

"Pa, out to gran'ma's we had real hen's eggs."

"Well, what other kind of eggs are there, Dicky?"

"Why, pa, you said all th' eggs we get in town are cold storage eggs."—Indianapolis Journal.



## Telephone in Bowersville.

We've got the telephone at last down here in Bowersville;  
The wires is stretched from Jimmy Lane's clear down to Griggs's mill;  
The bells is ringing all the time—an' don't it beat the Dutch!  
The women folks that always talked—they now talk twice as much!  
An' every day young Henry Sykes—our cut-up—sez, sez he:  
"Hello, there, central, I would like to have the brewery."

Ah, sence we got the telephone I stand here in the street  
An' hear the talk all over town in voices loud or sweet;  
The folks call one another up an' talk till they're half dead,  
An' then go meet each other to explain what all they said;  
The town is like a phonygraph a-runnin' fit to kill,  
Sence we have got the telephones way down in Bowersville.

An' yistuddy I called up nine-eleven-fifty-four,  
To have a friendly little talk with ol' Isaiah More;  
The feller at the telephone, he hollers back to me:  
"You can't git no connection there—he's busy now," sez he,  
An' I sez: "Well, jest let him 'lone. These things jest fill the bill—  
It's first time he's been busy sence he come to Bowersville."

—Baltimore American.

## Don't Wait for the Funeral.

"If folks would have their funerals when they are alive and well and struggling along, what a help it would be!" sighed Aunt Jerusha, folding her paisley shawl with great care.

"Now there is poor Mis' Brown," she added, as she pinned her Sunday bonnet into the green veil, "how encouraging she'd have been if she could have heard what the minister said to-day! I wouldn't wonder one mite if she'd have got well.

"And Deacon Brown a-wipin' his eyes and all of them taking on so! Poor soul, she never dreamed they set so much by her.

"Mis' Brown got discouraged. Yer see, Deacon Brown, he'd got a way of blaming everything onto her. I don't suppose the deacon meant it—'twas just his way—but it's awful wearing. When things wore out or broke, he acted just as if Mis' Brown did it herself on purpose, and they all caught it, just like the measles or whooping cough.

"And the minister a-tellin' how the deacon brought his young wife here when 't wa'n't nothing but a wilderness; and how patiently she bore hardship, and what a good wife she'd been! Now the minister wouldn't have known anything about that if the deacon hadn't told him. Dear, dear! if he'd only told Mis' Brown herself what he thought, I do believe he might have saved the funeral.

"And when the minister said how the children would miss their mother, seemed as though they couldn't stand it, poor things. Well, I guess it is true enough. Mis' Brown was always doing for some of them. When they were singing about 'sweet rest in heaven,' I couldn't help thinking that was something Mis' Brown would have to get used to, for she never had none of it here.

"She'd have been awful pleased with the flowers. They were pretty, and no mistake. You see, the deacon wa'n't never willing for her to have a flower bed. He said 'twas enough prettier sight to see good cabbage a-growin'; but Mis' Brown always kind o' hankered after sweet-smelling things, like sweet peas and such.

"What did you say, Levi? Most time for supper? Well, land's sake, so it is! I must have got to meditating. I've been thinking, Levi, you needn't tell the minister anything about me. If the pancakes and the pumpkin pies are good you jist say so as we go along. It ain't best to keep everything laid up for funerals."—Evening Herald.

What made the owl howl? The woodpecker would peck her.

## DOMESTIC ECONOMY.

## Domestic Hints.

**COCOANUT BLANC MANGE.**—Scald one pint of rich milk, and thicken with four tablespoons of corn starch wet with milk. Beat the whites of four eggs very stiff, and stir in. Add one cup of grated cocoanut, two-thirds of granulated sugar and a pinch of salt. Stir well and let cook five or ten minutes. Flavor to taste with either vanilla or almond and pour into moulds to harden.

**CHICKEN MAYONNAISE.**—Chicken mayonnaise in shells makes a delicious luncheon or picnic dish. Mince cold-boiled or baked chicken fine, moisten it with thick mayonnaise, season with salt and pepper, and fill into china or strong paper cases. Garnish the tops with stuffed olives, clear tomato jelly cut in fancy shapes, powdered yolks and shredded whites of hard-boiled eggs or minced parsley. Serve very cold.

**LEMON CAKE.**—This cake is made as follows: To a pound of powdered sugar add the grated rind of four large lemons and mix thoroughly; beat to a stiff froth the whites of three eggs; then stir into this the sugar, a teaspoonful at a time, making a smooth paste. Line a shallow baking pan with white paper, drop the paste on this paper in small round heaps, smoothing their surface with a broad bladed knife, dipped frequently in cold water. Bake a light brown in a moderate oven; remove cakes from paper when cool.

**STUFFED ONIONS.**—Boil some small Spanish onions until they are tender, then very carefully remove the inside, which should be put aside and used the following day for sauce, or it may be cut up and fried and served as a garnish to a broiled steak. Cut up some cooked carrot and turnip into small dice-shaped pieces, and cut some cooked bacon in the same way, and mix them together with some thick brown sauce. Fill the onions with the prepared vegetables, scatter some brown bread crumbs over the top, and pour a little warm dripping over them; then place them in a moderately hot oven for about a quarter of an hour. Serve the onions surrounded with thick brown sauce.

**BEEF A LA MODE.**—Cut three pounds of beef into square pieces and put it to soak in a marinade composed of three tablespoonfuls of vinegar, two cloves of garlic, six peppercorns and six cloves all finely pounded, a teaspoonful of salt, some powdered thyme, basil, marjoram and parsley. Allow it to macerate thus for two hours. In the meantime fry four onions cut in slices, and then in the same fat fry the pieces of meat. Add two tablespoonfuls of flour and stir until all assumes a bright brown color. Then cover with stock or water, boil up, and remove the first scum as it rises, add the marinade and gently simmer for three hours. Season nicely and serve either hot or cold. A dish of beetroot salad is a fitting accompaniment to this dish. It can be prepared from salt meat if preferred.

**EGG SALAD.**—Boil three eggs hard, cut in half lengthwise, remove the yolks and mash fine. Mix together in a saucepan the third of a teaspoonful each of dried mustard, salt and white pepper, a saltspoonful of curry powder, a few drops of onion juice, a teaspoonful of vinegar, two tablespoonfuls of egg well beaten, two tablespoonfuls of olive oil and a tablespoonful of rich cream. Put the ingredients together in the order in which they are named, beat well, set the bowl over the steam of the kettle and stir constantly until thick and creamy; remove and stir in the mashed egg yolks, a little at a time, and set on the ice to get very cold. To serve, fill the whites of egg, dividing the mixture among them, put each half egg on two or three leaves of tender lettuce, with mayonnaise dressing around them.

**BROWN BETTY PUDDING.**—Take for this pudding a cupful of grated bread-

crumbs, two cupfuls of finely chopped, tart apples, half a cup of brown sugar, a teaspoonful of cinnamon and one tablespoonful of butter; cut into bits; butter a deep pudding dish and put a layer of apples on the bottom, then sprinkle with sugar, cinnamon and butter, and cover with breadcrumbs; put in another layer of apples, and proceed as before until all the ingredients have been used, having a layer of crumbs last; cover the dish and bake three-quarters of an hour in a moderate oven, then remove the cover, and brown the top of the pudding. Serve with sugar and cream. May be used at lunch if so desired.

Curried eggs is a favorite dish with many. Make a cream sauce of one tablespoonful each of butter and flour and a cupful of milk. Add four hard-boiled eggs cut into large pieces. Season with curry to taste.

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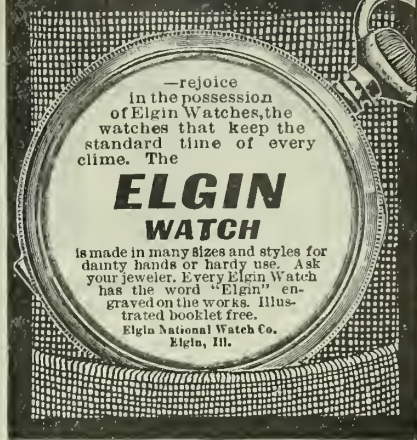
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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Nov. 13, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	72 3/4 @ 71 3/4	75 3/4 @ 74 3/4
Thursday.....	71 1/4 @ 72 3/4	74 3/4 @ 76 3/4
Friday.....	72 3/4 @ 73 3/4	75 3/4 @ 76 3/4
Saturday.....	72 3/4 @ 73 3/4	75 3/4 @ 76 3/4
Monday.....	72 3/4 @ 73 3/4	75 3/4 @ 76 3/4
Tuesday.....	72 3/4 @ 73 3/4	75 3/4 @ 76 3/4

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	37 3/4 @ 37 1/4	40 @ 39 3/4
Thursday.....	37 3/4 @ 38 3/4	39 3/4 @ 40 3/4
Friday.....	38 3/4 @ 39 3/4	40 3/4 @ 41 3/4
Saturday.....	38 3/4 @ 39 3/4	40 3/4 @ 41 3/4
Monday.....	38 3/4 @ 39 3/4	40 3/4 @ 41 3/4
Tuesday.....	39 3/4 @ 39 3/4	40 3/4 @ 41 3/4

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 00 1/4 @ 1 00	1 04 1/4 @ 1 05 3/4
Friday.....	1 01 @ 1 01 1/4	1 05 3/4 @ 1 06 3/4
Saturday.....	1 01 1/4 @ 1 01	1 05 3/4 @ 1 06 3/4
Monday.....	1 00 3/4 @ —	1 05 3/4 @ 1 06 3/4
Tuesday.....	1 00 3/4 @ —	1 04 3/4 @ 1 04 3/4
Wednesday.....	99 @ 99 1/4	1 04 3/4 @ 1 04 3/4

## WHEAT.

While speculative values touched higher points than preceding week, the upward movement was not very marked, nor was it sufficient to cause any appreciable advance in prices for spot wheat. Holders in most instances were firmer in their views and asking figures, and to have purchased freely the payment of better prices than lately current would have been necessary, but demand in the local market was far from active. The few firms engaged in exporting from here are well supplied with wheat for the time being, and are depressing ocean freight rates all they can, but they are not bidding up on wheat to offset the drop in freights. There has been a decline in the past sixty days of about \$2 per ton in charter rates for grain ships, but the price for wheat has not materially improved. There is room for another drop of \$2 per ton in grain freight rates from this port to Europe, with some prospects of the drop being experienced before the season closes, but should this decline take place, there is no assurance that wheat would fare materially better. Much will depend on developments in Europe and the East. Market closed weak.

California Milling.....	1 00 @ 1 05
Cal. No. 1 shipping, alongside.....	97 3/4 @ 98 3/4
Oregon Valley.....	98 3/4 @ 1 01 1/4
Washington Blue Stem.....	1 00 @ 1 05
Washington Club.....	97 3/4 @ 1 00
Off qualities wheat.....	92 3/4 @ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s 3/4 @ 6s 1/4	5s 10 1/4 @ 5s 11 1/4
Freight rates.....	40 @ 42 1/4	30 @ 32 1/2
Local market.....	95 @ 98 3/4	98 3/4 @ 1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.01 1/2 @ 99c.
May, 1902, delivery, \$1.05 1/2 @ 1.04 1/2.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at 99 @ 99 1/2; May, 1902, \$1.04 1/2 @ 1.04 1/2.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on November 1st and October 1st:

Tons—	Oct. 1st.	Nov. 1st.
Wheat.....	134,373	*152,350
Barley.....	84,414	†70,294
Oats.....	4,608	7,280
Corn.....	139	220

\*Including 86,539 tons at Port Costa, 64,985 tons at Stockton.

†Including 48,322 tons at Port Costa, 18,503 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show an increase of 17,977 tons for the month of October. A year ago there were 203,779 tons wheat in Call Board warehouses.

## FLOUR.

Values for this product are at practically same range as for some weeks past, but market cannot be termed firm. It is an easier matter to find sellers than buyers in a wholesale way at full current rates. Stocks are considerably larger than needed to satisfy the immediate demand.

Superfine, lower grades.....\$2 25 @ 2 40

Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

The outward movement by sea continues of fairly liberal proportions, both to England and New York. There is no appreciable change for the better to record in quotable rates for export grades, but current values are being well maintained, especially for round lots of uniformly high grade. Business transacted in feed descriptions was at generally unchanged values, but for the ordinary run of offerings the market could not be termed favorable to the selling interest. Prices for barley suitable for Call Board deliveries inclined slightly upward, values for futures being at a little higher range than had been ruling. At the close, however, the Call Board market showed more ease.

Feed, No. 1 to choice.....	72 3/4 @ 75
Feed, fair to good.....	70 @ 72 3/4
Brewing, No. 1 to choice.....	75 @ 82 3/4
Chevalier, No. 1 to choice.....	97 3/4 @ 1 02 3/4
Chevalier, poor to fair.....	75 @ 90

## OATS.

Market has shown steadiness in the main since last review, but has not been noteworthy for activity. There is a very fair demand for seed oats and desirable qualities for this purpose are commanding in a small way an advance on quotations, which are based on wholesale values.

White Oats, fancy feed.....	1 25 @ 1 30
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 00 @ 1 17 1/2
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 22 1/2 @ 1 27 1/2
Black Russian.....	95 @ 1 20
Red.....	1 00 @ 1 25

## CORN.

There are moderate offerings of new crop corn, but it is the exception where the quality is A1, as is to be expected at this date, very little corn being yet sufficiently seasoned to be desirable. For stock showing dampness the market is weak at the quotations herewith noted.

Large White, good to choice.....	1 30 @ 1 35
Large Yellow.....	1 20 @ 1 30
Small Yellow.....	1 30 @ 1 40

## RYE.

Prices are without quotable improvement. A shipment of 11,028 centals went forward this week by steamer for Germany.

Good to choice, new.....	72 3/4 @ 77 1/2
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## BUCKWHEAT.

Offerings and demand are both of a decidedly limited character, leaving values poorly defined.

Good to choice.....	1 45 @ 1 60
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## BEANS.

The market has not developed any pronounced changes since last review, but there has been considerable pressure to realize, and for other than most select qualities the tendency of prices has been in favor of buyers. The rainstorm of Saturday last did further damage to the crop in process of being harvested. Some threshers were running night and day, so as to get the crop safely housed, but were not so fortunate as to complete threshing when this second storm of the season came. Prospects are for a weak and irregular market for all defective qualities, while choice to select are apt to rule firmer rather than easier. Naturally the selling pressure at present is mainly on lower grades, for which there is little positive inquiry, either on local account or for shipment. Eastern markets are reported rather weak, with free arrivals and offerings on the Atlantic side of Eastern product.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	3 00 @ 3 25
Lady Washington.....	2 50 @ 2 80
Pinks.....	2 00 @ 2 25
Bayos, good to choice.....	2 40 @ 2 65
Reds.....	3 00 @ 3 25
Red Kidney.....	3 00 @ 3 50
Limas, good to choice.....	4 50 @ 4 75
Black-eye Beans.....	3 00 @ 3 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

Green or Blue Peas have been meeting with a little more inquiry than for several weeks preceding, but only at a low range of values. Market for Niles Peas is moderately firm, this variety being in good request at prevailing rates.

Green Peas, California.....	1 25 @ 1 75
Niles Peas.....	1 50 @ 1 60

## WOOL.

Business in this center is of a light order, largely owing to scarcity of desirable offerings. Most of the good to choice wools in the local market have passed into second hands, and prospects are that the new year will see little other than heavy

and defective fleeces in warehouses awaiting buyers. Values are quotably unchanged, but for seriously defective stock the quotations are of necessity based mainly on the views of holders, owing to lack of any noteworthy inquiry for wools of this sort.

## SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Humboldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 10
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	8 1/4 @ 8 3/4
San Joaquin Lambs.....	7 1/4 @ 9

## HOPS.

The market in this center is slow and devoid of strength. Bids from wholesale operators are difficult to obtain and when secured are invariably on a low basis, mainly within range of 8 @ 10c. Only very superior qualities attract either local or foreign buyers at any advance on latter figure. Quotations at present are more in accord with asking rates than with prices readily obtainable in a wholesale way.

Good to choice, 1901 crop.....	10 @ 12
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## HAY AND STRAW.

The hay market has shown somewhat unsettled condition the past week. Materially increased offerings before the rain caused an easier feeling, with sales of good to choice grades at a little lower range than had been prevailing. Since the last rain, with further damage to outstanding hay, weakness has been mainly on defective qualities, which are offering freely and bid fair to be in liberal supply throughout the season. On the other hand, choice to select hay is more apt to bring higher than easier prices later on.

Wheat, good to choice.....	9 00 @ 12 00
Wheat and Oat.....	8 00 @ 11 00
Oat.....	6 50 @ 9 50
Barley and Oat.....	6 00 @ 8 50
Barley.....	6 00 @ 8 00
Volunteer.....	5 50 @ 7 50
Alfalfa.....	8 00 @ 9 50
Clover.....	6 00 @ 8 00
Stock.....	5 00 @ 6 00
Compressed.....	9 00 @ 12 00
Straw, 3 bale.....	35 @ 47 1/2

## MILLSTUFFS.

Market for mill offal continues to incline in favor of the buying interest, more particularly for Bran and Shorts, with prospects of lower prices than now quoted being current at an early day. Market for Milled Corn was also weak and lower. Prices for Rolled Barley were without special change.

Bran, 3 ton.....	17 00 @ 17 50
Middlings.....	19 00 @ 20 00
Shorts, Oregon.....	17 00 @ 18 00
Barley, Rolled.....	16 50 @ 17 00
Cornmeal.....	30 00 @ —
Cracked Corn.....	29 00 @ —

## SEEDS.

Current values on Mustard Seed are being well maintained, offerings being of only moderate volume and demand fair. Flaxseed is arriving in considerable quantity from Washington, mostly under contract. Business doing in bird seed is light, but at quotably unchanged values.

	Per ctl.
Flax.....	2 65 @ 3 25
Mustard, Yellow.....	3 25 @ 3 40
Mustard, Trieste.....	3 00 @ 3 15
	Per lb.
Canary.....	3 1/4 @ 3 1/2
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

## BAGS AND BAGGING.

The same inactivity previously reported is being experienced in the bag market. Asking figures of jobbers remain practically the same as for some weeks past.

Calcutta Grain Bags, spot.....	7 1/4 @ —
San Francisco Grain Bags, 22x36, spot.....	7 @ —
Wool Sacks, 4 lbs.....	35 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 34
Fleece Twine.....	8 1/4 @ —
Gunnies.....	— @ —
Bean Bags.....	5 1/4 @ 5 1/2
Fruit Sacks, cotton, three sizes.....	5 1/2 @ 6, 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/2

## HIDES, PELTS AND TALLOW.

Hides continue in good demand at same range of prices last quoted. Pelts are not in active request at full current rates, but the demand is sufficient to prevent any serious accumulation of stocks or noteworthy decline in prices. Inquiry for Tallow is ample to absorb all offerings of good to choice quality.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 55 lbs.....	11 @ —	9 1/4 @ —
Medium Steers, 48 to 55 lbs.....	10 @ —	8 1/4 @ —
Light Steers, under 48 lbs.....	9 @ —	8 @ —

Heavy Cow Hides, over 50 lbs.....	9 1/4 @ —	8 1/4 @ —
Light Cow Hides, under 50 lbs.....	9 @ —	8 @ —
Stags.....	8 1/4 @ —	— @ —
Wet Salted Kip.....	9 @ —	8 @ —
Wet Salted Veal.....	9 @ —	8 @ —
Wet Salted Calif.....	10 @ —	9 @ —
Dry Hides.....	16 @ —	14 @ —
Dry Kip and Veal, 11 to 16 lbs.....	15 @ —	13 @ —
Dry Calif, under 4 lbs.....	17 @ —	15 @ —
Salted Horse Hides, large.....	2 50 @ —	— @ —
Salted Horse Hides, medium.....	2 00 @ —	— @ —
Salted Horse Hides, small.....	1 00 @ —	— @ —
Dry Horse Hides, large.....	1 75 @ —	— @ —
Dry Horse Hides, small.....	1 25 @ —	— @ —
Dry Colts' Hides.....	60 @ —	— @ —
Pelts, long wool, 3 skin.....	75 @ 1 00	— @ —
Pelts, medium, 3 skin.....	50 @ 75	— @ —
Pelts, short wool, 3 skin.....	30 @ 40	— @ —
Pelts, shearling, 3 skin.....	15 @ 30	— @ —
Deer Skins, best summer.....	35 @ —	— @ —
Deer Skins, good medium.....	— @ 30	— @ —
Deer Skins, thin winter.....	— @ 20	— @ —
Elk Hides.....	10 @ 12	— @ —
Tallow, good quality.....	5 @ 5 1/4	— @ —
Tallow, No. 2.....	4 @ 4 1/4	— @ —
Goat Skins, perfect.....	30 @ 37 1/2	— @ —
Goat Skins, small.....	10 @ 20	— @ —
Kid Skins.....	5 @ 10	— @ —

## HONEY.

Market is moderately firm at prevailing values, which remain quotably about the same as a week ago. There is considerable doing, both on foreign and local account. A shipment of 1,000 cases extracted went forward the past week per sailing vessel for England. A steamer took 107 cases for Holland.

Extracted, White Liquid.....	5 1/4 @ —
Extracted, Light Amber.....	4 1/4 @ —
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	10 @ 12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7

## BEESWAX.

There are no evidences of accumulations. Offerings of desirable quality meet as a rule with prompt custom at prevailing values.

Good to choice, light, 3 lb.....	26 @ 28
Dark.....	24 @ 26

## LIVE STOCK AND MEATS.

Beef was in reduced receipt and prices tended against buyers. In market for Mutton there were no special changes to record, quotable values continuing as last noted, with trade of fair average proportions. Veal is not arriving very freely and market for same presents a rather firm tone. Lambs now offering are principally Yearlings and do not command much of a premium over the price of choice Mutton. Hog market ruled fairly steady at last quoted decline, but some packers had more on hand than they could conveniently handle for the time being.

Beef, first quality, dressed, net 3 lb.....	6 1/4 @ 7
Beef, second quality.....	6 1/4 @ —
Beef, third quality.....	6 @ —
Mutton—ewes, 6 to 7c; wethers.....	6 1/4 @ 7
Hogs, hard grain fed, 150 to 250 lbs.....	5 1/2 @ —
Hogs, small, fat.....	5 1/4 @ —
Hogs, large, hard, over 250 lbs.....	5 1/2 @ 5 3/4
Hogs, country dressed.....	7 @ 7 1/4
Veal, small, 3 lb.....	7 @ 9
Veal, large, 3 lb.....	8 @ —
Lamb, spring, 3 lb.....	7 1/4 @ 8

## POULTRY.

There have been no particularly heavy arrivals of poultry of any description the past week, either California or Eastern. There was a fairly good demand, prices in the main keeping within moderate bounds, but stocks moved off more readily and cleaned up more promptly than for several weeks preceding. Fryers and Broilers commanded relatively the best figures. Turkeys were not in active request, but brought about as good average prices as preceding week.

Turkeys, dressed, choice.....	16 @ 18
Young Turkeys, full grown.....	14 @ 15
Hens, California, 3 dozen.....	4 00 @ 5 00
Roosters, old.....	4 00 @ 4 50
Roosters, young (full-grown).....	4 00 @ 5 00
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 50 @ 4 00
Broilers, small.....	3 00 @ 3 50
Ducks, old, 3 dozen.....	3 50 @ 4 00
Ducks, young, 3 dozen.....	4 00 @ 5 00
Geese, 3 pair.....	1 25 @ 1 50
Goslings, 3 pair.....	1 75 @ 2 00
Pigeons, old, 3 dozen.....	1 00 @ 1 25
Pigeons, young.....	1 50 @ 1 75

## BUTTER.

Further weakness has been developed in the market for fresh butter, with arrivals on the increase, while the demand is not brisk, and is not likely to prove very active until prices get down on a par with ice house stock. There is considerable cold storage butter on market, much of it proving as satisfactory to consumers as most of the fresh now coming forward, and is obtainable at materially lower figures than fresh of corresponding grade.

Creamery, extras, 3 lb.....	26 1/4 @ —
Creamery, firsts.....	23 @ —
Creamery, seconds.....	20 @ —
Dairy, select.....	22 @ —
Dairy, firsts.....	20 @ —
Dairy, seconds.....	18 @ —
Mixed store.....	14 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll, 3 lb.....	19 @ 21
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/4



## CHEESE.

There are no heavy stocks of any description, and especially is mild new of fine quality in light supply. Market is firm at quotations, with occasional sales in a small way at slightly higher figures.

California, fancy flat, new.....	12 @12½
California, good to choice.....	11 @11½
California, fair to good.....	10½ @11
California, "Young Americas".....	12½ @13½

## EGGS.

Strictly fancy fresh are in light receipt and are commanding much the same stiff prices as were realized the preceding week. For eggs running irregular in color or averaging small in size the market, however, was not firm. Pullets' eggs were difficult to dispose of, even at comparatively low figures. Cold storage eggs are in heavy stock, and prospects are not encouraging for a speedy or very profitable clean-up this season.

California, select, large, white and fresh.	41 @43
California, select, irregular color & size.	35 @37½
California, good to choice store.....	25 @30
California, common to fair store.....	22½ @25
Eastern, good to choice.....	23 @28
Cold Storage.....	22½ @27½

## VEGETABLES.

A noteworthy feature of the market was an improved demand and firm prices for Onions, with prospects favorable for still better prices being realized a little later on for choice stock. Tomatoes sold at a substantial advance on last quoted rates, with receipts of this vegetable on the decrease. The tendency of the market for nearly all vegetables now coming forward was to firmness, especially for most desirable qualities.

Beans, String, # lb.....	2 @ 3
Beans, Lima, # lb.....	2½ @ 3
Cabbage, choice garden, # 100 lbs....	50 @ 75
Cauliflower, # dozen.....	40 @ 50
Cucumbers, Bay, # large box.....	40 @ 60
Egg Plant, # box.....	40 @ 50
Garlic, # lb.....	2 @ 2½
Okra, Green, # box.....	40 @ 60
Onions, Yellow Danver, # cental.....	1 40 @1 60
Peas, Sweet garden, # lb.....	2½ @ 3
Peppers, Green Chile, # sack.....	40 @ 65
Peppers, Bell, # box.....	50 @ 75
Squash, Marrowfat, # ton.....	6 00 @9 00
Summer Squash, Bay, # large box.....	1 00 @1 25
Tomatoes, # large box.....	30 @ 65

## POTATOES.

With increased shipping demand and arrivals and offerings not particularly heavy, there was a firmer market developed, good to choice shipping grades commanding better average prices than preceding week. Fancy qualities of Salinas Burbanks and select Oregon Burbanks were taken on local account at higher figures than were current on export stock. Sweets were in ample supply and prices for same continued at rather low range.

Burbanks, Salinas, # 100 lbs.....	1 30 @1 60
River Burbanks in sacks, # cental.....	75 @ 90
Petaluma and Tomales Burbanks.....	1 10 @1 25
Oregon Burbanks.....	1 20 @1 40
River Reds.....	1 30 @1 50
Sweets, new, # cental.....	70 @ 85

## The Fruit Market.

## FRESH FRUITS.

The display of fresh fruits is getting down to mid-winter proportions, as is to be looked for at this date. Apples naturally take the lead in the deciduous fruit line. There are fairly liberal supplies of Apples, but no large proportion of strictly choice to select. For the latter sort the market shows firmness, with every prospect of so continuing during the balance of the season. Lower grades are in ample stock to keep prices for this sort at a tolerably low range. Pears of high grade and desirable for table use, such as choice Winter Nellis, were in quite limited supply and salable to good advantage. Ordinary or cooking Pears were not much sought after, and where prompt custom for such fruit was secured rather low prices had to be accepted. Quinces moved slowly and market was easy at range of prices below quoted. Persimmons sold at much the same figures as preceding week, but only for choice and ripe did the market incline in favor of sellers. Pomogranates met with rather slow custom, and it was the exception where full current figures were realized. Grapes were not in as heavy stock as preceding week; offerings as a rule showed more or less damage from rain, and of other than strictly choice there was more than enough for the demand. Berries of all kinds in season were salable in the main to good advantage, especially where the quality was desirable. Choice Longworth Strawberries met with a firm market.

Apples, fancy, # 4-tier box.....	1 25 @ 1 50
Apples, good to choice, # 50-lb. box.....	60 @ 1 00
Apples, common to fair, # 50-lb. box.....	40 @ 60
Figs, # 1-layer box.....	65 @ 75
Grapes, Cornechon, # crate.....	60 @ 75
Grapes, Black, # crate.....	40 @ 75
Grapes, Muscat, # crate.....	40 @ 75
Grapes, Tokay, # crate.....	40 @ 85
Pears, Winter Nellis, # 40-lb. box.....	75 @ 1 50
Pears, other kinds, # box.....	50 @ 1 00

Persimmons, # box.....	40 @ 75
Pomegranates, # box.....	65 @ 1 00
Quinces, # box.....	35 @ 50
Raspberries, # chest.....	5 00 @ 7 00
Strawberries, Longworth, # chest.....	9 00 @10 00
Whortleberries, # lb.....	5 @ 8

## DRIED FRUITS.

In the market for cured and evaporated fruits about the only change of noteworthy importance since date of last review is an improvement in the demand and in quotable values for evaporated Apples, due to the development of more firmness East and to increased inquiry here on export account. Quotable values for evaporated Apples have advanced about half a cent for standard qualities and fully a cent for choice to fancy. On sun-dried Apples there has been no appreciable advance, but they are held a little more firmly, owing to the improved figures current on evaporated. Prunes are moving slowly, both on local and outside account, the market for this fruit being for the present far from satisfactory. Oregon Prunes have been selling on the 2c. basis for the four sizes, and some have quoted Oregon stock as low as 1½c. for the four sizes. To endeavor to compete against such prices is folly. The more Prunes Oregon sells at these figures the worse she will be off, and the sooner will there be prospect of the California grower again realizing a living profit on this product. Stocks of Apricots, Peaches, Pears and Plums are mostly in second hands, and while there is a fair jobbing trade in these varieties for this time of year, such transfers as are being made are in most instances affording little or no profit to the handler, the result of a quiet market, with liberal supplies on hand, and a desire to reduce holdings. Taking the past as a criterion, no special revival of trade in the dried fruit line is likely to be experienced until after the mid-Winter holidays.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 @ 7½
Apricots, Royal, choice, in sacks, # lb.....	8 @ 8½
Apricots, Moorpark.....	10 @12½
Apples, in 50-lb boxes, rings, pressed, fancy.....	8 @ 8½
Apples, 50-lb boxes, rings, pressed, good to choice.....	6 @ 6½
Figs, pressed.....	5 @ 6½
Nectarines, # lb.....	5 @ 6½
Peaches, unpeeled, fancy.....	7 @ 7½
Peaches, unpeeled, choice.....	6 @ 6½
Peaches, peeled, in boxes.....	12 @14
Pears, halves, choice to fancy.....	6 @ 8½
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	5 @ 6
Prunes, 4 sizes, in bags, 2½@3c; 50-60s, 3½@4½c; 60-70s, 3¼@3½c; 70-80s, 2¾@3¼c; 80-90s, 2¼@2½c; 110s and less, 1½@2c; these figures for 1901 crop.	

## COMMON SUN-DRIED.

Apricots.....	6 @ 6½
Apples, sliced.....	2½ @ 4
Apples, quartered.....	3 @ 4
Figs, Black.....	2½ @ 3
Figs, White.....	2½ @ 3½
Peaches, unpeeled.....	5 @ 6
Pears, prime halves.....	5 @ 6
Plums, unpitted, # lb.....	1¼ @ 2½

## RAISINS.

There is a fair movement in raisins, with values at the same low range current since the opening of the season. Heavy inroads have been made on this year's crop. Loose Muscatels now constitute the bulk of offerings from first hands. Clusters are all sold. There are very few Sultanias now obtainable from growers, and stocks of Thompson's Seedless show decided reduction, with the cheaper grades practically all marketed.

Following are the prices for new crop, as fixed by the Fresno Association:

Loose Muscatels—	Per lb.
4-crown.....	4½
3-crown.....	4½
2-crown.....	3½
Seedless Muscatels.....	4½
Seedless Sultanias.....	5
Thompson's Seedless.....	6
Bleached Thompson's—	
Extra Fancy.....	11
Fancy.....	10
Choice.....	9
Standard.....	7½
Prime.....	—
Seeded—	
Fancy.....	6½
Choice.....	5½
London Layers, 20-lb boxes—	
2-crown.....	1 10
3-crown.....	1 20
4-crown.....	—

## CITRUS FRUITS.

Not much doing in Oranges, consumers not having the appetite for this fruit to any great extent at present. Regular sizes of Navels which are ripe and in every way desirable are meeting with fair custom at \$3.25@3.50 per box. Business in all green and all small Navels, as also in Seedlings and Tangerines, is of slow order, and market is lacking in firmness. The movement in Lemons is light, and the prices prevailing show no improvement over those last quoted. Limes are in lighter supply and firmer.

Oranges—Navels, # box.....	2 50 @3 50
Seedlings, # box.....	1 75 @2 25
Tangerines, # ¼ box.....	1 25 @1 50

Lemons—California, select, # box.....	2 50 @—
California, good to choice.....	1 75 @2 25
California, common to fair.....	1 00 @1 50
Grape Fruit, # box.....	2 00 @3 00
Limes—Mexican, # box.....	4 50 @5 00

## NUTS.

Almonds are moving outward rather freely, prices showing no material change. What are known as the Hatch varieties are selling mainly at 10c in carload lots, Non Pareils commanding 11c. Langue-does in round lots are quotable at 7@7½c. Wholesale transfers of the Drake variety are mainly at 8c. Business in Walnuts is of fair volume and at steady values. Previously quoted figures for Peanuts continue to be maintained.

California Almonds, shelled.....	17 @20
California Almonds, paper shell, # lb.....	10½ @12
California Almonds, soft shell.....	7½ @ 9
California Almonds, hard shell.....	5 @ 6
Cal. White Walnuts, No. 1 soft shell.....	9 @ 9½
Cal. White Walnuts, No. 2 soft shell.....	7 @ 7½
Cal. White Walnuts, No. 1 hard shell.....	8½ @ 9
Cal. White Walnuts, No. 2 hard shell.....	8½ @ 7
Cal. Chestnuts.....	7 @10
Peanuts, California, fair to prime.....	4½ @ 5½
Peanuts, Eastern, hand-picked.....	5½ @ 6
Pine Nuts.....	5 @ 6

## WINE.

There is next to nothing doing in the way of transfers from first hands, and not likely to be for several months to come, or until this year's vintage begins to come upon the market in noteworthy quantity. Last year's wines are practically out of the way, so far as offerings from growers are concerned. Last year's dry wines are quotable nominally at 25@30c per gallon wholesale, and that a lower range of values than 20@25c per gallon will be established on this year's product is not probable. Shipments by sea from this port in October were 1,422,550 gallons and 1,466 cases, showing a valuation of \$482,150. In October, 1900, shipments were 826,250 gallons and 617 cases, representing a total valuation of \$239,640.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, ¼ sacks.....	136,937	2,491,960
Wheat, centals.....	202,953	2,380,946
Barley, centals.....	162,129	3,278,979
Oats, centals.....	24,790	487,593
Corn, centals.....	1,345	27,108
Rye, centals.....	530	89,608
Beans, sacks.....	53,077	329,934
Potatoes, sacks.....	36,595	538,980
Onions, sacks.....	5,201	121,467
Hay, tons.....	4,740	61,625
Wool, bales.....	2,076	36,264
Hops, bales.....	381	4,844

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, ¼ sacks.....	68,072	1,887,506
Wheat, centals.....	161,489	2,033,639
Barley, centals.....	261,841	2,458,477
Oats, centals.....	—	2,117
Corn, centals.....	—	7,996
Beans, sacks.....	1,470	15,685
Hay, tons.....	—	4,740
Wool, pounds.....	—	511,316
Hops, pounds.....	24,415	240,827
Honey, cases.....	1,035	4,305
Potatoes, pack's.....	—	16,327

## California Dried Fruit at New York.

NEW YORK, Nov. 13.—Evaporated apples, common, 6@8c; prime wire tray, 8½c; choice, 9c; fancy, 9¼@9½c.  
California Dried Fruits.—Business light, with prices fairly steady.  
Prunes, 3½@7c.  
Apricots, Royal, 8½@13c; Moorpark, 9@13c.  
Peaches, unpeeled, 6@9½c; peeled, 11@15c.

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lasts that long under ordinary conditions. First the life of a wagon depends upon the wheels. This one is equipped with our Electric Steel Wheels, with straight or stagger spokes and wide tires. Wheels any height from 24 to 60 in. It lasts because tires can't get loose, no re-setting, hubs can't crack or spokes become loose, felloes can't rot, swell or dry out. Angle steel hounds. **THOUSANDS NOW IN DAILY USE.**  
Don't buy a wagon until you get our free book, "Farm Savings," ELECTRIC WHEEL CO., Box 10 Quincy, Ills.

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P & B Building Paper gives to a frame building all the advantages possessed by a building of brick or stone, and at the same time is entirely free from the faults found in stone structures.

The building paper is placed between the walls and the floors and keeps the building at an even temperature all the year round.

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116 Battery Street, S. F., Cal.

**Improved Fresno Scraper.**  
5-FOOT. WEIGHT, 300 LBS.  
**NEW STOCK. NEW PRICES.**



**HOOKE & CO.,**  
16 and 18 Drumm St., San Francisco, Cal.



## SAVE \$10.- PER COW

EVERY YEAR OF USE.

### DE LAVAL CREAM SEPARATORS.

Prices \$50.- TO \$800.-

"Alpha" and "Baby" styles. Send for Catalogue.

#### THE DE LAVAL SEPARATOR CO.

Randolph & Canal Sts., | 74 Cortlandt Street,  
CHICAGO. | NEW YORK.  
103-105 MISSION STREET,  
SAN FRANCISCO, CAL.

## Patrons of Husbandry.

### Advantages of a Home on Farm.

"The Advantages of a Home on the Farm Above a Home Elsewhere" was the subject before the San Jose Grange recently, and it proved one of absorbing interest. The attendance was large, the papers strong and the discussion able. The following report is from the Mercury:

**THE OPENING SPEAKERS.**—Judge Lewis spoke of the benefits of a farm life, where the young people were raised in the pure air of heaven and the pure moral atmosphere of the family life, where there was health-giving, innocent work for all, so that when night came they could sleep that refreshing sleep that comes from such a life. It is the stalwart men and good women who come from the farm that achieve success and renew the mental, moral and physical life of the cities.

E. A. Hayes thought the country home the ideal home, where there was close communion with nature, where the environments are poetical. He said that the money necessary to secure a city home would procure one in the country with a profitable acreage of orchard. Even where one did business in the city, the country home was wise, from the standpoint of economy, and it offered so many advantages for the children. The early impressions of the child had much to do with the formation of the character of the man and woman, and the impressions received in the country home were, in his opinion, the best.

Mrs. Tuck spoke of some of the disadvantages of the country life, in that the child might suffer from the isolation of the farm, if care was not taken. On the same line of thought, Prof. V. Rattan said that the children of the farm did not get all they should of their life, and that nature study would aid in this.

Mrs. Lillick read a poem descriptive of the farm and farm life.

Hugh Leigh spoke of some of the hard work and drudgery of the farm, and thought there should be care exercised that the life was not made burdensome to the children.

**FAT PURSE HUNG UP.**—S. P. Sanders' paper in part was as follows: "Happiness is the big fat purse which is hung up to reward the winner in the race of life. Some imagine that the purse is filled with gold. Others that it is full of fame or political preferment and honor, the reward of success in any line of effort or achievement. The boy who has been reared on the farm, where he was in contact with nature on intimate terms, has possessed himself of some knowledge which he could never get from books alone, and, whatever course he may take to gain happiness—the goal of his ambition—or however successful he may be in attaining it, he will find the soil still clinging to him in the form of wisdom which he has dug up 'down on the farm.' If the boy raised on the farm comes in his manhood to be a railroad magnate, riding in his sumptuous private car, he will still be making comparisons with the rides of his little home-made sled, coasting down hill, and wishing there was some way to make it 'get along' as fast as his sled did. If he gets to be an artist and goes hunting the earth for something worth while to paint, he will find nothing to surpass the flame in the forest when frost touches the maple and sumach. There is no music like the singing of the trout brook and the wild old woods. No wine at the banquet like water raised by the well sweep and the old oaken bucket. No fruit comes to mar-

ket as good as strawberries that grew on short stems in the sand out in the pasture lot. No big hotel can furnish a place to sleep so comfortable as the unfinished chamber up under the rafters, where he could hear the rain on the roof. A man is only a boy multiplied by years. His achievements are only capacity multiplied by aspirations—the happiness is what is left after the chaff of his follies is winnowed from the wheat. A home on the farm furnishes the best environment in which men and women of the future can be born and reared. It is the incubator and brooder, too, of that portion of the race that does the business and controls the activities of the world. If large modern cities had to rely on city born and city bred population, the third and fourth generations would see themselves dwindling and perhaps depopulated. It is only by continued recruiting from the country the stalwart sons, fresh from the soil from which they grow, and gentle daughters to bear them company, that cities may increase in population, grow and prosper. The advantages of a home on the farm for boys and girls are that they have at first hand all the elements of growth and development—whole milk fresh from the cow, new laid eggs, butter and buttermilk, as soon as they have exercised their muscles enough to churn them. Apples and peaches ripened on the tree, berries and vegetables from the garden that have not had time to die, everything to please the eye and gratify the taste at the mere cost of production, all produced in the process of wholesome development of the animal girl or boy, through the manual training which is necessary to maintain the harmonious action of the body and mind. To plant and hoe, to prune and hope and harvest is the benevolent routine appointed by nature to teach us the wise way to make a living. To busy ourselves with the beginning of things, to preside over their destinies as they develop towards fruition, to experience the feeling of proprietorship in what our hands have produced, waiting on nature, sitting in council as partners with her, acting on her hints of what is best to be done, and when and how, condoling with her when our plans are frustrated, receiving her congratulations and rejoicing with her at the happy issue of our joint experiments, uplifts the tiller of the soil and endows him with almost the attributes of a creator. The advantages of a home on the farm can hardly be stated or understood correctly if we confine ourselves to what we know about it locally. We must consider the farm in a broader sense than belongs to the orchard and the business of fruit growing. We, locally, those of us who attend the Grange and many others who ought to, are growing fruit because this business happened to be coming into vogue just at a time when we had finished a course in some other pursuit in life, perhaps disastrous, without any particular hankering after it, without any previously acquired knowledge to guide us. Like a young maiden wooed by a rich old man we were allured by the promise of wealth, not by love. Still, we thought we might learn to respect it. We yielded to the blandishments of the real

estate agent, who located us where we could plant an orchard and wind it up once a year, leaving the hired man to run it down, while we could live in town and enjoy the privileges of political, religious, social and immoral society, while the orchard was making us rich. If, however, we resolved to lead a better life and become an honest farmer, we found ourselves restricted to the narrow limits of ten or twenty acres in solid orchard; no pasture. If we wanted a horse or cow we must go and buy one ready made and keep it hermetically sealed in a stall and never see the "stump of a hollow tree from which they were hatched." Many pleasant features of farm life are missed when it is devoted to a specialty. The aim of the old-style farmer was, primarily, to make a living for himself and family; secondly, to lay up a surplus for a rainy day and give his children a chance to learn how to do it better than he could. I will not undertake to show that there is any advantage in a home on the farm above a home elsewhere, if I am restricted to the type of farm we see hereabout. We differentiate our lives from town lives as little as possible, and in the things we cannot make run parallel with the things in town we think we suffer a deprivation, rather than enjoy an advantage. Fresh air is about the only claim we can maintain for supremacy. We do special farming because it lends itself to our scheme to make money easily; but, failing in our specialty, there is no compensation for expended effort; we have no potatoes to fall back on when prunes fail. Such farming is largely a makeshift, a fad of disappointed professional men, retired seamen, bankrupt merchants, men with one lung, who think it can be done without talent. The orchard is a place of banishment, perhaps, where the poor weakling of the city, enervated to the pleasant vices of aimless lives, may be exiled for a while to brace up. There is nothing in it for the farmer besides the purely mercenary consideration involved, and small cause for glorification."

## Sharples "Tubular" Dairy Separators.

Greatest Step Ever Made in Advanced Cream Separator Construction.

If cost more, are worth double, for they produce enough more butter than the best competing separator to pay fully 6 per cent interest on whole first cost of machine.

We Absolutely Warrant It and Give Free Trial to Prove It. Also very light running, a 600lb. machine turning easier than other 300 lb machines. No disks to bother with and get out of order. No complications.

If you want to know about all different separators, send us for a copy of "The Separator," containing an expert opinion on them, together with free Catalog No. 131. Sharples Co., Chicago, Ill. P. M. Sharples, West Chester, Pa.



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### FARM WAGONS

any size wanted, any width of tire. Hubs to fit any axle. No blacksmith's bills to pay. No tires to reset. Fit your old wagon with low steel wheels with wide tires at low price. Our catalogue tells you how to do it. Address EMPIRE MFG. CO., Quincy, Ill.



## Page

### An ELASTIC Elastic

is not more satisfactory than Elastic Page Fence. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.



## MONARCH

### Grubber and Stump Puller.

HOOKE & CO.,  
16 and 18 Drumm Street, San Francisco.



## Easy Harness

All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of

### Eureka Harness Oil

The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes. Made by STANDARD OIL CO.

What does a chimney do to a lamp?  
MACBETH'S is the making of it.

My name on every one.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.  
MACBETH, Pittsburgh.

## DAIRY AND CREAMERY SWEEPSTAKES WON BY

THE PRODUCT OF THE

### Improved U. S. Separator

AT THE  
Valley Fair, Brattleboro, Vt., Sept. 25-26, 1901  
LARGEST FAIR IN THE STATE

The following is a list of the winners and their scores:

DAIRY SWEEPSTAKES		
Mrs. Carrie J. Nelson, Ryegate, Vt.,	-	97½ points
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Divided between		
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East Ryegate Creamery, East Ryegate, Vt.,	-	97 points

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"The Kind That Gets All the Cream"

### THE WINNER OF GOLD MEDAL AT THE PAN-AMERICAN

VERMONT FARM MACHINE CO., Bellows Falls, Vt.



## Breeders' Directory.

### HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except last on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**JERSEYS, HOLSTEINS & DURHAMS.** Bred specially for use in Dairy. Thoroughbred Hogs. Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**PETER Saxe & Son**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**J. H. GLIDE**, Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

### POULTRY.

**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**"SNOW WHITE" GOBLERS** for sale by C. A. Stowe, 330 N. Grant St., Stockton, Cal.

**WILLIAM NILES & CO.**, Los Angeles, Cal. Nearly all varieties chickens, geese, ducks, peafowl, etc.

**SANTA TERESA POULTRY FARM**, Eden Vale, Santa Clara Co., Cal. Illustrated catalogue with show record for 1900, free. Agents Eclipse Aluminum Leg Bands; sample 2 cts.

**FOR BREEDING** Hare and Poultry in small lots, address Cottonwood Farm, Pleasant Grove, Cal.

**MEAT MEAL.** Best quality. Lowest price. A. Warren Robinson, Napa, Cal.

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**BERKSHIRE AND POLAND-CHINA PIGS.** C. A. Stowe, 330 N. Grant St., Stockton, Cal.

**BERKSHIRE, POLAND-CHINA & DUKO HOGS.** Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**POLAND-CHINA PIGS** by Sweepstakes Boar at State Fair 1901. None Better. S. P. Lindgren & Sons, Kingsburg, Fresno Co., Cal.

**W. R. McCASLIN**, Cosumnes, Sacramento Co., Cal. A1 breeder of Poland-China Hogs.

**DR. R. CAUCH**, Carpinteria, Cal. Registered Berkshire Hogs for sale.

**P. H. MURPHY**, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**CHAS. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

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**POULTRY** supplies of all kinds. Send for my new price list and booklet, "HOW TO FEED FOWLS FOR PROFIT," CROLEY, 503 Sacramento St., San Francisco, Cal.

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With the Globe Incubator there are no failures—every fertile egg hatches. It is so simple to operate any person can handle it successfully. With its system of hot water pipes for heating, and the ventilation being so perfect it hatches stronger, healthier chicks and more of them to the 100 eggs than any other. Teachers, preachers, students, professional men, business men, farmers, farmer's wives, mechanics and day laborers, with no experience and little money, make their leisure hours pleasant and profitable with Globe Incubators. There is always a good cash market for chickens. Write for catalogue, price lists and full information free. C. C. SHUMAKER, Box 419, Freeport, Ill., U.S.A.

### PIGS FOR SALE.

Nine Four-Month Registered Berkshire Pigs. \$10 EACH, OR \$75 FOR THE NINE. E. S. GORDON, Box 13, SANTA ROSA, CAL.

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## DIRECTIONS FOR SUCCESSFUL OLIVE PICKLING



**P**LACE olives in solution composed of 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove tartness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 6 oz. salt to gallon water for 7 days. Put in brine 10 oz. salt to gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles scalded in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

## YOU MUST USE RED-SEAL-LYE

## EMERY'S BEEF, BLOOD & BONE FOR POULTRY.

Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are high. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

N. OHLANDT & CO., INDIANA AND YOLO STS., SAN FRANCISCO, CAL.

## HOLSTEIN CATTLE.

SLEEPY HOLLOW RANCH, SAN ANSELMO, MARIN CO., CAL.

ALL THE LEADING FAMILIES OF THE BREED.

Every Sire directly imported from Herds of the Greatest Eastern Breeders.

Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams.

Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.



## STATE FAIR VISITORS

knew good pigs when they saw them and our sales were much larger than in any other year, which has reduced our stock to a small number.

We have a few pigs ready to ship and other litters coming on.

We won a large number of premiums which show the character of the herd. We still claim to have the best large herd on the coast and are adding new animals when we find good ones.

Persons wanting good pigs should get in their order early to get a choice of litters.

Correspondence solicited.

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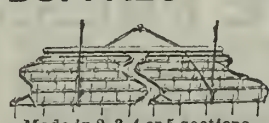
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Breeder of SHORTHORN AND HEREFORD CATTLE.

Young Stock for Sale.

LOVELOCK, NEVADA.

## BUFFALO PITTS SPIKE TOOTH HARROW.



THE ONLY SPIKE TOOTH HARROW SUITABLE FOR ORCHARD OR VINEYARD.

NOTICE THE FRAME—IT WILL NOT HARM THE TREES OR VINES.

ASK YOUR DEALER FOR IT.

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## GLENN RANCH,

Glenn County, :::: California,

## FOR SALE

### In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

**F. C. LUSK,**

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

## Southern Pacific. SHORT LINE

—FROM THE—

EAST to CALIFORNIA.

FEWEST MILES

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FEWEST HOURS

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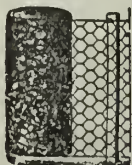
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## Cocoanut Oil Cake.

THE BEST FEED FOR STOCK, CHICKENS AND PIGS.

For sale in lots to suit by

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"Greenbank" Pure 100% Caustic Potash and 98% Powd. Caustic Soda.

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## Large Outfit of Prune Machinery.

Barngrover, Hull & Co. of San Jose have just finished the machinery for the Cured Fruit Association at Santa Clara and have put in two extra large (5-foot) graders, two large latest improved processors with cleaner, elevator and boxing hopper, so that the work is entirely automatic; two freight elevators, floor trucks, wheelbarrows, presses, scales, etc. The machinery is placed on the third floor and the fruit conveyed to the graders and processors by means of their improved bucket elevators. This machinery will have a capacity of about 150 tons per day. It is expected that they will have the best built and the best equipped packing house in the State.

## Citrus Tree Planting.

A 36-page book issued by R. M. Teague, San Dimas, Cal., gives a great deal of valuable information about citrus trees, and the best methods of planting and caring for them. Mr. Teague has been engaged for eleven years in growing citrus trees, raises nothing but citrus tree stock, and claims as a result that he is able to give closer attention to all of the details and to sell better stock than the man who divides his interest among all kinds of trees. The booklet is sent without charge to all applicants.

## New Patents.

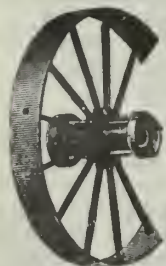
DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING OCTOBER 22, 1901.

684,904.—HAY GATHERER—L. J. Barber, Eagleville, Cal.  
685,089.—PROPELLER—J. Barnett, Los Angeles, Cal.  
684,800.—WATER WHEEL—W. A. Doble, S. F.  
685,038.—RUBBER SUBSTITUTE—Ellis & Werner, Carson, Nev.  
684,931.—SAWMILL SET WORKS—D. B. Hanson, Seattle, Wash.  
684,987.—CANE CULTIVATOR—A. Horner, Paaullo, H. T.  
684,988.—CANE BUNDLER—A. Horner, Paaullo, H. T.  
684,816.—LEVEL—A. S. Moss, Los Angeles, Cal.  
685,000.—CAN CLEANING MACHINE—W. Munn, S. F.  
685,005.—GOLD SEPARATOR—A. P. Palmer, Oakland, Cal.  
685,084.—MAKING LINE—A. L. Shubert, Sacramento, Cal.  
684,956.—CABLE GRIP—P. R. Stuart, Oakland, Cal.  
684,961.—BIGCYCLE REST—C. L. Vonderahe, Portland, Or.  
684,966.—EGG BEATER—A. Weisenback, Reedville, Or.

FOR THE WEEK ENDING OCT. 29, 1901.

685,502.—ANIMAL TRAP—T. Ainsworth, Pleasanton, Cal.  
685,369.—T SQUARE—J. D. Barrie, Los Angeles, Cal.  
685,419.—MILKING STOOL—J. H. Beattie, Puyallup, Wash.  
685,563.—STEAM ENGINE—R. H. Botts, Richmond, Cal.  
685,673.—CORONET ROLLS—A. C. Calkins, Los Angeles, Cal.  
685,574.—HAND CASE—J. A. Conbole, Virginia, Nev.  
685,400.—PRINTING PRESS—A. O. Hayes, Los Angeles, Cal.  
685,685.—POWER GENERATOR—E. Krabenbuhl, San Rafael, Cal.  
685,284.—TRUNK—J. Longshore, Jr., Sacramento, Cal.  
685,412.—THILL COUPLING—G. L. Shermerhorn, Medford, Or.  
685,535.—SIGNATURE GATHERER—J. E. Smyth, Pasadena, Cal.  
685,306.—DOOR CHECK—Stewart & Snyder, Medford, Or.  
685,389.—WRENCH—J. B. Tupper, S. F.  
685,361.—NEEDLE HOLDER—G. H. Wartman, Montesam, Wash.  
685,363.—LOOKING HOOK—E. L. Weed, Baker City, Or.  
685,517.—WEATHER STRIP—B. M. Whiting, Spokane, Wash.  
685,704.—AIR COMPRESSOR—M. C. Wilkinson, Los Angeles, Cal.  
685,386.—WINDOW SHADE FIXTURE—F. Winne, Colusa, Cal.  
685,680.—LAVATORY—G. L. Woodworth, Stanford, Cal.



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—FOR—  
Farm Wagons.

28-30-32 and 34" Wheels  
with 4 and 5" Tires.

Make a Good Low Down  
Truck Out of Your Old

Wagon at a Good Low Down Price.

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We are the largest manufacturers of Steel Wheels and Truck Wagons in the World. Write for Catalogue. Havana (Ill.) Metal Wheel Co.

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Examine it thoroughly and you will buy it, we are sure of that. Best steel wires, heavily galvanized. Six styles, all sizes.

To the eye of a practical man it is the perfect woven steel fence. Sold everywhere. Guaranteed. If your dealer hasn't it, write to

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is in full swing and you ought to see how the people buy them, many of our patrons taking as many as 6 to 10 guns.

THERE ARE THOUSANDS OF OLD  
U. S. Rifles, Carbines and Revolvers

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## FOR PURPOSES OF DECORATION

the old dogs of war are especially valuable, particularly because the supply is limited and can never again be replaced.

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**WAR RELICS**

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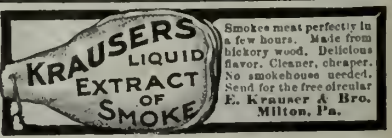
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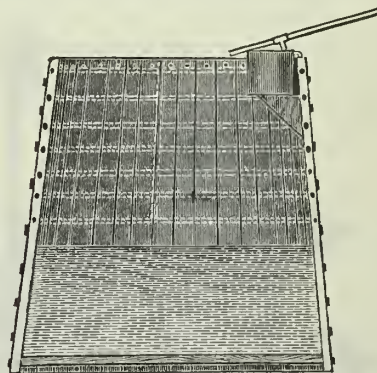
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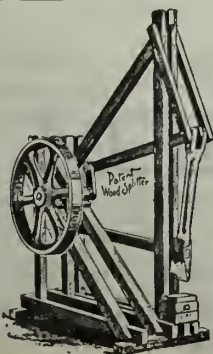
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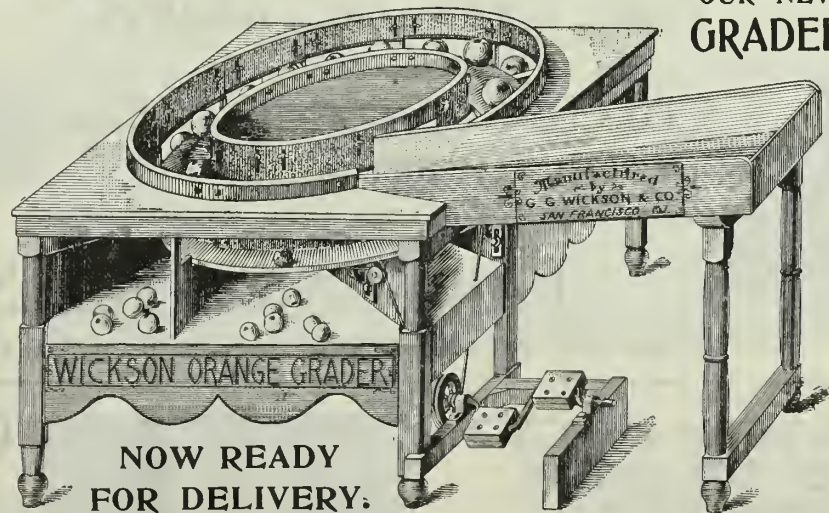
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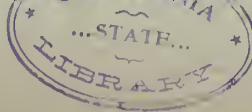
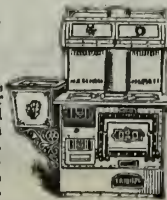
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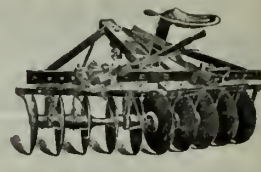


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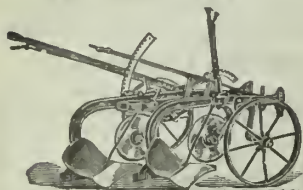
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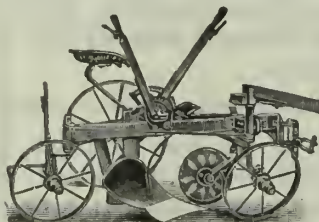
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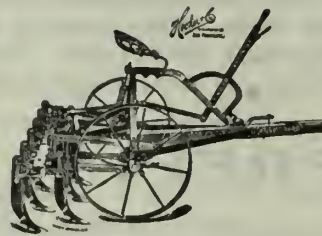
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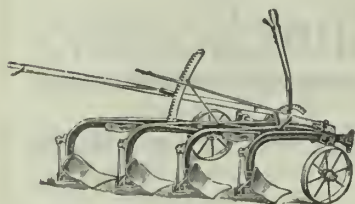
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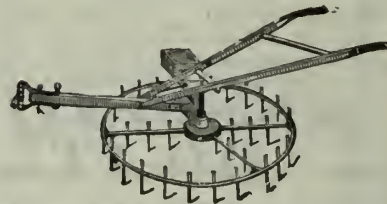
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 21.

SAN FRANCISCO, SATURDAY, NOVEMBER 23, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### The Santa Clara Vine Trouble.

There is a great deal of comfort in the report upon the death of vines in Santa Clara county, which we present upon another page of this issue. It is comforting in that the investigation by Messrs. Bioletti and Twight of the Agricultural Department of the State University discloses sufficient cause for the death of the vines in the natural shortage in the moisture supply, in some cases accompanied by injury to the vine by careless viticulture, etc. This is, of course, much better than if the inquiry had disclosed the presence of some virulent disease, or even if the facts made it necessary to infer the existence of such disease which could not be definitely made out. All readers will have an opportunity to decide for themselves, on the basis of the data cited, whether or not, in their view, the abnormal conditions which have prevailed are sufficient to account for the injury. As remarked above, it is comforting to reach such conclusion, because it shows that if nature returns to her old generosity in rainfall, or if the grower makes good any lack by irrigation, the growth of vines can be maintained if found profitable.

We have often held the view in these columns that very much unthrift and actual destruction of fruit trees must be attributed to insufficient moisture to maintain old bearing trees and to neglect on the part of growers to assist the tree by regulation of bearing to a reasonable weight of fruit. We are stronger than ever in this view because of later observation. California is perhaps as good a place as there is in the world to secure thrift and production in a well-furnished and tended tree, and it is also perhaps as bad a place as there is in the world for a neglected tree. If this general proposition is enforced by the recent experience in Santa Clara county, the losses of the last year will not be altogether in vain. The vine has perhaps had the sharper trials because of the conception that the vine was so hardy; that nature had made it to endure drouth and neglect and still repay its owner richly. We have perhaps presumed too much upon the endurance of the vine. Even its patience may have a limit.

We have upon this page the engravings with which the University experts enforce some of their observations. Fig. 1 shows a poor old vine stump which has undergone a severe amputation; and in

default of a little paint, all agents of corruption have entered and destroyed the whole central axis of the vine. Fig. 4 shows in sharp contrast how a maltreated vine appears side by side one which has escaped disease by having a sound center.

Fig. 2 shows how marked is the difference in behavior of different varieties. The Mataro, being unable to withstand the hard times, has succumbed, while the Grenache, though having the same trials, has regained vigor as better times came. Along the same line is the contrast in Fig. 3, in which the weakly Mataro has died all around two vines of Trousseau.

The showing, which is so fully made upon another page, brings out strongly a number of points which should have a stronger counting in any work that is done in restoring old vineyards or in planting new ones. The vigor of plants which enables them to resist hardships, and the attacks of parasites of various kinds, should have higher regard in our calculations. The development of resistant varieties, the selection of those already useful which have such power, are both promising, progressive measures. They should receive more attention. At present people are very slow to arm themselves against difficulties and to protect their property against encroachment. They are too



Fig. 1.—Vine Injured by Heavy Pruning Without Protection to Wound.



Fig. 2.—Adjacent Blocks of Mataro (Dead) and Grenache (Recovering).



Fig. 3.—Two Healthy Trousseau Vines in a Vineyard of Dead Mataro Vines.



Decayed Trunk.

Fig. 4.

Sound Trunk.

apt to take the chances when it can be demonstrated that the chances are largely against them. Perhaps the showing now made of the vine troubles in Santa Clara may do something toward the enforcement of safer policies in all our planting enterprises.

REPORTS from Fresno are favorable for outlook in the raisin trade. Most of the second crop has gone to the wineries and thus is cleared away. It is said that this season's product will average well up to last year's grade in spite of the rains, and the Association packers claim to have no difficulty in disposing of the fruit in the Eastern markets. The situation seems somewhat mixed, but more people are on the hopeful side than formerly.

ONE of the worst bands of cattle rustlers that ever infested the West is now operating in southeastern Oregon.



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San Francisco, November 23, 1901.

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## The Week.

Out-door affairs are still in satisfactory condition, and more moisture has been received throughout the upper two-thirds of the State. There is still, however, in many large areas, a desire for a greater rain to bring some of the heavier lands into good plowing condition, and the signs are that such will not be long delayed, for it rains easily this year, apparently. On summer-fallow and in the lighter soils, where early work has been possible, there is now much grain showing a thrifty green and promising well. Feed is also coming on fast, and the pasturage seasons will be long and rich. Late field crops and early crops of winter fruits are being rapidly handled. In the more active interior regions development enterprises, both by individual and company effort, are being pushed, and the outlook generally is very favorable.

Wheat has recovered from the recent sagging and shippers have nerved themselves up to pay a cent. The Eastern markets are better and local options are better to-day than for a week back. There is quite a movement: ten cargoes, part and full, have gone of wheat and four of barley. Barley prices are unchanged, except that Chevalier is lower, probably for lack of quality. Oats are held steadily and there is moderate movement. Corn is irregular, much coming in bad shape and dry corn scarce. Rye and buckwheat are unchanged. Large white and Bayo beans are firm, the former especially so. Limas are steady. Bran is lower and middlings are weak. Hay is firmer for some kinds and weaker for others; medium grades are selling pretty well; alfalfa hay is better and clover hay lower. Beef is firm at the last advance and mutton is higher. Hogs have checked their decline, for buyers are bidding the same rates for next week, but the situation is dragging. Eastern markets are better. Butter is slow at former rates—a little fancy sells well. Cheese is in sharp demand with high supplies. Fancy eggs are very high and cold storage supplies freely drawn upon. Poultry is doing well, except for turkeys, which are dragging now, but expected to liven up next week. All young fowls are selling well. Potatoes are higher for shipping and onions are also advanced; both are in good demand for speculation and present use. Fine fresh deciduous fruits are scarce and high. Oranges and lemons are weak and limes are cheap. Dried apples are high and active, but other dried fruits are slow. Nuts are selling pretty well. Honey is firm and not much offering here. Hops are dragging and buyers seem timid. There is still demand for desirable wools and little in sight.

The effort to organize the grain growers so that the crop may be handled as a unit for a term of years on the basis of minimum cost of transportation and handling is being pushed in the San Joaquin and Sacramento valleys. President Pierce and promoter

Van are doing some very strong talking and are succeeding in winning the interest of many growers and lessors of grain lands to their proposition to distribute the profits, which are now supposed to go to a group of city shippers, among those who are nearer to the land. The movement has not yet, however, shown the wide strength and popularity which are essential to success, and this is hardly surprising. All such undertakings can only succeed upon a wide conviction of the feasibility and opportunity in united action, and it is a slow process to bring the masses of the people to that state of mind. It will require plenty of patience and work to secure even the careful attention of all the people interested. Those who have faith in the undertaking must not get discouraged too easily.

The dairy school now in progress at the State University at Berkeley is proving very satisfactory so far as the diligence and progress of the pupils are concerned. They are working faithfully through the long days in the factory, laboratory and classroom, and testify that they are learning large lessons, both in dairy science and practice. There are about thirty-five in regular attendance, including two ladies, and they are making up about 1500 pounds of milk a day into butter and cheese according to most approved methods. So much interest and spirit have been aroused that the pupils have organized themselves into an association, which they propose to sustain, after their work in the University is complete, for the promotion of dairy science in this State and their own further attainment in it. The accommodations for the school in the present building at Berkeley are rather restricted and the operations interfere somewhat with other exercises in progress in adjacent lecture rooms. Better quarters are very desirable and will, we trust, be provided ere long. The first thing to be demonstrated has, however, been attained, viz.: the demand for the instruction and the disposition of the pupils to make good use of it. In the future California must provide for this work, something as other dairy States do, largely and liberally.

If there is any special industry of the State which needs a union of effort and wisdom to bring it to satisfactory condition, it is the olive interest. We noted a while ago the effort at organization which was begun in southern California. We are glad to see that this is proceeding promisingly. Secretary A. R. Sprague of the Southern California Olive Growers' Association says the Association is nearing successful completion. They have between 2000 and 3000 acres signed up already, although the movement has not been started in other parts of the State. People are sending in their names, and every grower who has been approached indorses the proposition. Olives have sold lately in southern California at from \$30 to \$35 a ton for oil and for from \$35 to \$45 for pickles. They formerly sold at from \$45 to \$60 for oil and from \$60 to \$80 for pickles. These prices should be had again and thereby secure moderate returns. Utter lack of co-operation has brought about the present condition of affairs. The Association will not confine the movement to southern California alone, but will extend it to all parts of the State where olives are grown. No doubt the subject will come up strongly at the Fruit Growers' Convention in this city the first week in December. As will be seen by the programme on another page, there will be a report on the olive outlook by a special committee, and the true inwardness of the olive should be laid bare.

There are many other items in the programme of the coming convention which fruit growers should give heed to. The programme committee has done a good work, and if we mistake not we shall have a meeting which will surpass even that of last year in attendance and vigorous action. The many matters of interest in fruit shipping and in handling by the various growers' associations will be presented in such a way that wider understanding of them must be reached. The exceedingly important connection of government policies with our producing interests will also be made clear. The fact that the presidents of the two great universities will occupy the platform the same afternoon shows that these leaders in education fully appreciate the importance of the assembly to the highest concerns of the State. We

can strongly urge all growers who can to come to San Francisco on that week and bring their wives and daughters along. Not only will all the proceedings be of interest to them, but the fact that the ladies are to have a half day all to themselves should induce the women to appear in unusual force. Let us all come to the convention, even if we have to eat Belgian hare for Christmas dinner.

The awakening at Pleasanton last week on the horse interest should be emulated at other old centers of equine activity. We should be breeding more horses of the types now in wide demand, and for which work California has exceptional fitness. A writer for the Oakland Enquirer remarks that the demand for a good class of draft horses, roadsters and animals of farm work has been stimulated to a considerable degree from the fact that military operations in the Philippines, China and South Africa have drawn largely upon the available supply in this country. Then the prosperous seasons in agricultural sections have increased the demand for work horses. At one time Petaluma and Pleasanton were two of the best horse depots in the interior of the State for superior draft horses, and many thoroughbred and imported Clydesdale and other high-bred sires were owned in these sections. Recently there has been neglect of this line of breeding and it should now be revived. Nothing could be better to revive interest than to hold exhibits and speed trials and show everybody that we still have good horses and ought to have more of them. It is getting late for this year, but begin early next spring and see how the horse market will pick up.

It seems clearly demonstrated that a great service was done for the future of the California prune by the exhibit made at the Pan-American by the Cured Fruit Association. We have received a picture of the cooked prune booth which was maintained, and at which prunes in various styles of the culinary art were given to visitors. How many were thus shown the California product we do not know, but some suggestion may be found in the fact that there were distributed 75,000 copies of the prune recipe book issued by the Association. These went into as many different homes all over the United States, and possibly because of this exhibit and these recipe books not less than a million persons have been made aware of the possibilities that lie in prunes in the culinary line, and have a receipt book by which these possibilities may be realized. Knowledge of this kind spreads out from the centers of prune knowledge that have thus been established in almost every community, and it is impossible to estimate the final and total influence of this exhibit and demonstration in the use of prunes. This is work that can only be done when the growers co-operate, for it is work that redounds to the benefit of all, and if there were no other reason for co-operation among the growers this would be a sufficient one.

Inspection and certification of export dairy goods can now be given at this point in accordance with the general policy of the Department of Agriculture, which is authorized by law to do this work. Mr. McArthur, who is the local inspector of dairy exports, can be found at 114 California street, and can so mark the export goods which he finds to be up to the grade that they can be recognized anywhere abroad as having the certification of Uncle Sam that they are pure and good. There has been trouble abroad by the shipment of bad stuff, and this makes buyers shy. Of course, there is no way to require such certification, but those who handle pure goods will desire it, and customers in foreign parts will soon pass by the unmarked goods. It is a good thing that the work has been begun here.

But there are other things centering at San Jose as well as prunes. The close of the canning season at that important center gives a local statistician opportunity to present these interesting summaries of the pack of the several canneries, viz.: California Fruit Canners' Association, 190,000 cases; Golden Gate Packing Company, 65,000 cases; Los Gatos Cannery, 70,000 cases; Flickinger Company, 35,000 cases; Pyle Canning Company, 30,000 cases; Ainsley Canning Company, 45,000 cases. Total output, 435,000 cases.



QUERIES AND REPLIES.

Alfalfa Bloat and Straw Sandwich.

TO THE EDITOR:—Will you please give a few salient facts in regard to alfalfa bloat in cows, its cause and the most approved methods of prevention and cure? Some cows of each herd do not bloat? Is there any treatment known that will improve the digestion of the rest to make them less liable to bloat? Can alfalfa be cured with good hay at this season—with heavy dews each night—by mixing it with straw, or otherwise?—M. E. TAYLOR, Ceres.

A few salient facts about alfalfa bloat are that the bloating is due to distension of the stomach by the gas resulting from fermentation of the forage which has been swallowed in excess of the digestive capacity of the animal; that some cows are more voracious than others and, therefore, get into trouble; that all animals are apt to overeat when they are quickly changed from dry to green feed; that alfalfa is more likely to ferment when it is wet when eaten, and will seldom bloat when it is cut and allowed to wilt before stock are allowed to eat it; that bloating is less likely to occur when the stock has access to straw, or other dry feed, as well as to alfalfa; that the prevention of bloating is promoted by putting stock upon it for a very short time at first, and not when they are very hungry; that animals can be relieved of the inflating gas, sometimes by simple devices, such as pushing a smooth hose well greased down the throat into the stomach, through which the gas will escape, or by putting a stick of wood in the mouth, like a bit, with strings from the ends of the stick to the horns, so that the gas will escape while the cow is struggling to get the bit out of her open mouth; that in severe cases the safety of the animal depends upon the wise use of a narrow knifeblade, or a trocar and canula, by which an incision is made through the hide into the paunch to allow the gas to escape that way. These are a few of the salient facts about bloat. As for mixing alfalfa and straw in alternate layers, it is a good practice and will save both the alfalfa and the straw, for the cattle will eat both up clean.

Bulb and Seed Growing in California.

TO THE EDITOR:—I have lately arrived from England and have thought of taking up bulb and flower seed growing. Can such things be profitably grown here?—READER, Los Angeles county.

Bulb growing in California for export has already received considerable attention, and almost all kinds of bulbs are being grown by different parties in various parts of the State. It is impossible to give any comprehensive statement of the matter in this connection; the details have appeared in our columns from time to time for the last quarter of a century. There have been many disappointments and failures, for it is a business requiring full knowledge, enthusiastic devotion and a great deal of business sense. It should not be carelessly undertaken, and not on a large scale at first. Flower seed growing is also receiving wide attention in California, and very large amounts are grown here under contract with Eastern growers or for wholesale in Eastern markets. The chief region where such seeds are grown are Gilroy and San Jose, Santa Clara county, and Arroyo Grande, San Luis Obispo county. Flower seeds of very high class from selected varieties and from hybrids are also grown in Ventura county. Thus you will see that the matter which you have in hand has been under consideration for a great many years and considerable attainment has already been secured. It would be well for you to give as much time as you can to personal visitation of seed farms to learn the local needs and in that way probably save yourself very considerable experimentation which others have already carried on at considerable cost.

Early Pruning of Vines.

TO THE EDITOR:—Can a vineyard be harmed by pruning as early as Nov. 20, providing the foliage has been stripped off by sheep or by frost?—VINE GROWER, Elk Grove.

It is a fact of quite wide observation that pruning vines very early induces them to make an early start in the spring, and in many places this early start renders them very liable to injury by frost. Otherwise there is no harm to be expected by pruning at this date. Because of this early starting of the vines some growers in frosty localities are now pruning much later in the season than they formerly

did. You will have to determine for yourself whether this consideration is of particular moment with you.

Early Budding in the Mojave Region.

TO THE EDITOR:—You make the suggestion in the PACIFIC RURAL PRESS of Nov. 16 of the desirability of earlier budding of almonds in this dry region, where nearly all buds fail, in spite of the utmost precaution, if put in from July to September. It is an interesting fact that two years ago 5000 trees were budded in March and April, and all the buds grew, but were killed by the frosts of May. How does this affect your proposition?—READER, Manzanita.

We are glad to receive this additional point. The fact that so many buds took well in the spring, while, as our correspondent stated last week, nearly all failed from July to September, shows clearly that the budding must be done, as we stated, earlier in the season, while there is good sap flow, and in advance of the extreme heat and drouth of midsummer in that trying region. If buds can be made to stick and start well then, so much is gained. It seems as though March and April are too early. If it could be done early in May the buds might attach well and tender growth would start a little later—too late, perhaps, to be caught by frost, and still early enough to make a durable growth. If, however, the budding must be done so early that frost may come, the buds must be protected from frost, if need be, by loose wrapping with some fibrous material like straw, yucca leaves or anything else that may be available. Probably only quite a thin covering will be enough to protect the young growth. This would seem to be the solution of budding operations where the soil is so dry that the sap is scant in midsummer, and where there are likely to be hot, dry winds which will prevent the attachment of the bud to the stock. Probably budding can be done at that season of the year in the ordinary way and the solution of the difficulties lies more in the time of inserting the buds than in expensive methods of tying with waxed bands, etc.

The Imperial Epineuse.

TO THE EDITOR:—Have you yet heard of any objections to the Imperial Epineuse prune? I have heard that they get black at the pit and are therefore not desired by prune buyers. If this is the case, I must dig mine up and plant some other kind of tree.—SUBSCRIBER, Winters.

We have not heard of discoloration where the fruit was dried under favorable conditions, but there is complaint of the difficulty of drying so large a prune so late in the season, and unhandsome fruit resulting from unfavorable weather which is likely to be then encountered. In the Winters region, however, the ripening ought to be earlier and the weather usually better for drying than in the coast valleys. We shall be glad to hear experience with this variety in different localities. How does it compare in all respects with the Sugar prune?

Lawn Grasses.

TO THE EDITOR:—I wish to make a small lawn on a soil of mixed adobe sand and humus, easily worked. It is near Tomales bay, and we have much fog and moist air. Which is the best grass, and will it succeed without irrigation?—READER, Marshall, Marin county.

The most satisfactory lawn grass for situations near the coast, and where generous watering and frequent cutting will be given, is Kentucky blue grass. The Australian rye grass will quickly produce a good verdure and will look respectable with less water. The tendency of the rye grass, however, is to become more coarse and bunchy, and never has the beauty of the blue grass lawn. Whichever of these grasses you choose to use, it would be desirable to add white clover. The seedsmen will give you the amount of grass and clover combined, if you will send him the approximate area which you wish to put into lawn.

Growing Horse Beans.

TO THE EDITOR:—I wish to plant a few acres of horse beans, such as the Portuguese raise, and would like to know the best way to plant—broadcast or in drills, and if in drills, how far apart? Would it do to drop them in the furrow behind the plow about every third or second furrow, planting about 30 inches between rows—the beans about 6 inches in the row? I have raised them in the garden and they yield well, and wish to try them as a field crop for hog feed.—HOG RANCHER, Sea View, Sonoma county.

The method you propose is very good. They should

be grown in rows and kept clean with a cultivator. You will get a much better crop. Do not cover too deeply at this time of the year, especially if the soil is at all heavy.

Macaroni Wheat.

TO THE EDITOR:—I enclose you some seeds. Can you tell me through the columns of your paper what they are and what they are good for?—READER, Merced.

The seed is one of the macaroni wheats which we hear so much about nowadays. It is a hard, glutinous wheat, slab-sided like a shoepeg. It is the type of wheat which it is said France and Italy wish to buy for macaroni making.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending November 18, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

Weather conditions have been nearly normal during the week. Light rain has fallen in some sections. The rain of the preceding week was very beneficial to early grain and pasture, and in some places enabled farmers to resume plowing and seeding. Grain is making good progress, and green feed is becoming abundant. Sugar beet harvest is not yet completed. The heavy crop of hay in San Benito county is nearly all baled, and the warehouses are full. Vine planting is in progress in Napa county. String beans and tomatoes are on the vines in the vicinity of Calistoga, and have not been injured by frost. Apple drying is nearly completed. Corn harvest is progressing; there is a fair crop of good quality. No damage was done by light frosts at Peachland on the 11th and 12th.

SACRAMENTO VALLEY.

Cooler weather has prevailed during the week, with light frosts in some localities. The rain of last week and light showers toward the close of the present week have been of great benefit. Early sown grain is growing rapidly and is in excellent condition. Green feed is abundant. Plowing and sowing are progressing rapidly, with indications of a large acreage of grain. Orchards are in good condition, and pruning continues. A large crop of excellent oranges is being gathered in Butte county, and shipments are being made as rapidly as possible. Olive picking and pickling are progressing.

SAN JOAQUIN VALLEY.

Cool, cloudy weather has prevailed during the week in most sections, with heavy fogs and dews. Light frosts have occurred in some localities, and heavy frosts in others, but no damage has resulted. Rain fell throughout the valley toward the close of the week, but it was too light to be of much benefit except in a few places. Early sown grain is making good growth and pasture is becoming plentiful. Plowing and seeding are progressing, with prospects of a large acreage of wheat and barley. Egyptian corn harvest is in progress. Cattle are in good condition. Late grapes are going to the wineries, and heavy shipments of dried fruits, hay and grain are being made. Orange picking is progressing.

SOUTHERN CALIFORNIA.

The weather has been generally clear and cool, with fogs along the coast. Rain during the preceding week was of great benefit to orchards, pasture, volunteer grain and celery. Beans have not been so seriously damaged by rain as anticipated, and a late estimate places the loss at about 10%. The celery crop will be heavy and of good quality. Plowing and seeding are progressing. Green feed is becoming plentiful. Potatoes are looking well. Oranges are coloring rapidly and are generally in good condition, though there are some reports of splitting.

EUREKA SUMMARY.—Rain the latter part of the week benefited grain and pasture. Plowing is progressing satisfactorily. Some localities report a large acreage seeded. Crops are nearly all gathered.

LOS ANGELES SUMMARY.—Fair, growing weather followed rain. Grass and volunteer grain are growing rapidly. The soil is in fine condition. Plowing proceeds expeditiously. Oranges are coloring fast; splitting continues. Some shipments for holiday trade.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, November 20, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....	2.06	8.84	14.35	7.80	61	40
Red Bluff.....	.70	4.94	4.28	3.94	64	40
Sacramento.....	.54	3.22	3.66	2.83	68	40
San Francisco.....	.35	2.66	4.30	2.72	61	50
Fresno.....	.02	1.67	4.54	3.46	73	42
Independence.....	.04	1.69	1.23	1.05	66	30
San Luis Obispo.....	.04	3.94	5.47	2.74	74	40
Los Angeles.....	.00	2.44	2.95	1.71	78	44
San Diego.....	.00	.75	1.04	.98	70	50
Yuma.....	.00	.22	.02	1.16	82	42



## THE VINEYARD.

### Why Vines Died in Santa Clara Valley.

By F. T. BIOLETTI AND E. H. TWIGHT in Bulletin 134 of the University of California Agricultural Experiment Station.

In accordance with directions by Director E. W. Hilgard, we have examined the vineyards of Santa Clara with the object of determining the cause of the failure and death of a large number of vines in parts of that county during the last three years. It is not possible at present to give a completely satisfactory explanation for such serious and widespread damage as has occurred, but our observations seem to prove conclusively two propositions: First, that the dying vines exhibit symptoms differing materially from those shown by the vines in southern California which were destroyed by the Anaheim disease; and, second, that whether or not there be some "unknown influence" at work, as suggested by Mr. Newton B. Pierce, the real, determining factor is the deficiency of rainfall during the years 1897-1900.

**AREA AND GENERAL CHARACTER.**—The dying of vines without perceptible adequate cause during the last three years has by no means been confined to the west side of the Santa Clara valley. Similar cases have been reported and investigated over a wide area extending from the northern part of Sonoma county, to the western and southern parts of the Santa Clara valley, and including nearly all the older vineyard districts within these limits. The only peculiarity of the cases on the west side of the Santa Clara valley is their number, extending in many cases to every vine in a vineyard. The distribution of the injured and dead vines is not in any of the cases examined such as to suggest an infectious parasitic cause. In some instances single vines failed and died sporadically where the main bulk of the vineyard was in fair condition, and a dead vine was usually surrounded by vines which were apparently healthy.

**NATURE OF INJURY.**—In most of these sporadic cases examined the dying vine was found to have been severely injured in some way, usually by cutting off large branches at the pruning and thus causing large wounds. Vines of this kind when split open were found to be more or less decayed in the middle, and many were quite hollow. In a report made last year on the same subject this decay of the interior of the trunk was suggested as the cause of death in some cases. This year, however, though in some vineyards the hollow vines have continued to fail and die, in others they have recovered. This indicates that, though the wood decay may have contributed to the effect, it is not the only nor indeed the chief cause.

The accompanying photograph (see first page) illustrates the injury done by the cutting off of a large branch. The large wound could not heal over, and allowed a large amount of wood to dry out. There is a hole made by a boring insect, which allowed the entrance of moisture and of white ants, and favored the growth of wood-rot fungi. The stem of this vine was found, on being split, to be quite hollow nearly down to the surface of the ground. general appearance of vines of this kind is shown by a photograph of one of these vines in contrast with the perfectly healthy appearance of the neighboring vine.

**NATURE OF SOIL.**—Nearly, if not quite, all the cases occurred in gravelly soil, and the more gravelly the soil the more numerous and serious the cases. Soil borings in the most badly affected vineyards showed a layer of many feet of coarse gravel, commencing at 2 or 3 feet from the surface. In attempting to irrigate in these places the growers had much difficulty in causing the water to flow to all parts of the vineyard. A large stream of water would take many hours in passing a few yards, on account of the extremely leachy nature of the soil, which allowed the water to escape downward.

**AGE OF VINES.**—It is to be noted that none of the dying vines are young. All the vineyards examined which were less than eight years old showed no indications of failing or dying. All cases of young vines failing which were examined were plainly due to lack of cultivation, phylloxera, sunburn, or other well known and adequate causes.

Another fact worth mentioning in this connection is that the old vines which were grafted just before the three dry years, are now nearly or quite healthy. In one vineyard a block of old Mataro grafted with Verdal about 1896 shows strong growth and no signs of failing, while a contiguous block of the same variety and age, but ungrafted, is practically dead.

**BEHAVIOR OF DIFFERENT VARIETIES.**—A great deal of difference was everywhere noted in the behavior of different varieties of vines. The most seriously affected were Mataro, Zinfandel, Rose of Peru, Mission, Emperor and Burger. Varieties less affected were Grenache, Muscat and Verdal. These three varieties, in many cases where they looked very bad last year and even this spring, appear to be recovering. Other varieties show little or no damage. The chief of these noticed were Trousseau, Cabernet-Sauvignon,

Pinot (?), Verdot, Robin noir and Herbemont. This list indicates that the heaviest bearers are the most seriously affected and that all the immune varieties are light bearers. This difference in varieties was so marked that several Trousseau vines growing in a Mataro block were apparently perfectly healthy and vigorous, while the Mataro were all dead. This is shown in the photograph. The recovery of less susceptible varieties, such as Grenache, was in several cases very remarkable. Two adjacent blocks, one of Grenache and the other of Mataro, showed a remarkable contrast when examined in August of this year. Both blocks had made very short growth in 1900, but this year all the Mataro were dead, while none, so far as could be seen, of the Grenache had died, and though the block had looked sickly in the spring, when examined in August it showed a fine growth of luxuriant foliage.

To recapitulate; the main facts ascertained are:

1. All the dying vines are old.
2. All the serious cases are in gravelly soil.
3. The varieties most injured are all heavy bearers.
4. Vines grafted before the drought are healthy.
5. Vines showing serious mechanical injuries succumb first.
6. Vines which have not become too weak appear now to be recovering.

**CAUSES.**—These facts seem to indicate that we can ascribe the failure of the vines to a general cause acting over the whole district; a cause, however, which was only effective where supplemented by one or more contributory conditions. These conditions are:

1. Excessively gravelly soil.
2. Susceptibility of the variety of vine, due probably to heavy bearing and perhaps to some peculiarity of wood and foliage, or roots.
3. Large wounds made in pruning.
4. Age of the vine.
5. Severe cutting back of the young growth by severe frosts.

The general cause seems to be the combined effect of the heavy crops of 1896 and 1897 and the four years of drought which followed.

**RAINFALL AND CROPS.**—The following statistical table, made up from data furnished by the Weather Bureau and by two of the largest vine growers in the most seriously affected districts, fortifies the above position:

RELATION OF PRECIPITATION AND IRRIGATION TO CROP, IN VINEYARDS IN SANTA CLARA VALLEY.

	Precipitation at Santa Clara.	Crop on Vineyards at West Side.		Departure from Normal Rainfall.
		A (300 acres)	B (170 acres)	
	Inches.	Tons.	Tons.	Inches.
1896.....	19.51	1,413	....	+3.24
1897.....	11.82	1,883	d 800	-4.45
1898.....	8.13	500	d 215	-8.14
1899.....	15.56	c 449	d 93	-.71
1900.....	13.15	b 315	c 94	-3.12

(a) Irrigated thirty-five acres.

(b) Irrigated 300 acres.

(c) Irrigated seventy acres in February. From fifty acres of the irrigated land were obtained forty-nine tons of grapes, and from the remainder of the vineyard only forty-five tons. This indicates about one ton per acre on the irrigated and about one-quarter ton per acre on the unirrigated portion.

(d) Estimated from the wine produced.

If the figures given for these two vineyards are typical, which there is every reason to suppose, they may help us to find a sufficient cause for the death of the vines without taking refuge behind the mysterious and highly unsatisfactory Anaheim disease. In 1896 the vines bore a large crop, but were supplied with sufficient water by a rainfall of 3 inches above the normal. They therefore entered the season of 1897 healthy, but probably not with an excess of reserve food material laid up in the stems and roots; for the weakening effect which a heavy crop often has upon a plant is due to the fact that the nutriment which it absorbs and assimilates during the summer and autumn is nearly all utilized in the production of fruit, and little is stored for use in the following spring. The spring growth of a plant is all due to this reserve food, and is the weaker the less of this reserve it has to draw upon. Usually a year of heavy bearing is followed by a year of light bearing, during which the plant is able to recuperate by utilizing the food assimilated during the year for building up its vegetative organs and for replenishing its depleted reserve. During the season following the heavy crop of 1896, however, the weather conditions were evidently such as to force the vines to expend all their resources in the production of the phenomenally large crop of 1897. How exceptionally large this crop was upon the vines which are now dying is not quite indicated by the table above, which includes the crop from all varieties and ages of vines. The crop on the old vines of heavy-bearing varieties which are now dead was doubtless much in excess of the indicated average. At the same time that this

severe drain was being made upon them there was a shortage of over 4 inches in the annual rainfall. It is practically certain, therefore, that these vines were obliged to start the year 1898 with empty storehouses, and the rainfall of that year being just half the normal, the vines not only bore very little, but were unable to obtain nutriment sufficient to satisfy their vegetative needs and to nourish their permanent organs—roots, stems and canes.

The next year, 1899, therefore, they commenced to fall and some of them to die. In 1900 still more died, while in 1901, the present year, the largest mortality of all occurred. It is, perhaps, not quite clear why the mortality should be greatest in the later years when the deficiency of rain was less than in 1898, the year of the greatest drought. It should be remembered, however, that a lack of water may affect a plant in two ways: If it occurs at a time when the plant is in vigorous growth and full leaf the plant is injured or killed by diminution of the amount of water in its cells and tissues, due to the excess of evaporation from the leaves over the absorption by the root hairs. In this case the plant dies of thirst and dies suddenly at the time of the drought. If there is, on the contrary, a chronic deficiency of water in the soil, commencing in the winter before the plant commences to grow, the result is simply a small, weak growth of foliage, insufficient to supply food for the needs of the stem and roots. The roots thus having a restricted food supply fail to grow with normal vigor and in turn fail to supply the rest of the plant with the soil nutrients which it is their function to collect. We have in this latter case not so much injury from thirst as gradual starvation, which is slower in its action, and probably, when several dry seasons follow each other, cumulative, as the reserve food supply becomes each year more depleted until the plant dies.

**SUMMARY.**—This, then, seems to us the true explanation of the death of vines in the Santa Clara valley, stated in a few words: Slow starvation, due to excessive prolonged drought following two exceptionally heavy crops. That some vines have died and others have lived is due, as we have shown, to co-operating influences, the principal of which are the character of the soil, the variety of grape, the age of the vines, and the exhausting effect of late spring frosts in certain vineyards.

The objection to the drought theory which has been made—that irrigated vines have suffered as much as unirrigated—does not appear to be valid, as, in all the cases which we could find, the irrigation was applied too late. Very little irrigation was practiced until 1899, and then only upon the worst vineyards where the vines were already injured beyond redemption. The irrigation, to have been effective, should have been given during the winter of 1897-98, the season of greatest drought, and immediately succeeding the two years of abnormally heavy crops. This would have insured the strong growth of foliage during the following summer needed to repair the drain of the preceding years and to replenish the depleted stores of reserve food supply in the trunk and branches. That irrigation was of some value, even when practiced late, is indicated by the record of vineyard B in the foregoing table, which shows that the irrigated portion of the vineyard produced four times the crop per acre produced by the unirrigated portion, though the amount of water used was only about 3 inches, or just enough to make up for the shortage in rainfall of the year.

**YOUNG VS. OLD VINES.**—The immunity of young vines, and of old vines which had been grafted about 1897, is explicable on the theory that they were enabled to withstand the drought because they did not bear in 1897 and were thus saved the drain of that heavy crop. The same reason may account to some extent for the immunity of certain light-bearing varieties. That vines on other soils and in other localities have escaped the destruction that has overtaken the West Side varieties is due doubtless to the fact that the three destructive factors of drought, heavy bearing and leachy soil have not elsewhere been so great nor simultaneous.

**NOT ANAHEIM DISEASE.**—The reasons which have led us to reject as unproven the theory which ascribes the death of the vines to the Anaheim disease are based upon the divergence of the symptoms from those which distinguish that disease, as characterized in Bulletin 2 of the Division of Vegetable Pathology of the U. S. Department of Agriculture, entitled "The California Vine Disease," by Newton B. Pierce. This pamphlet must be considered as the highest authority on this disease, as it is almost the only, or, at least, the most complete and voluminous, publication on the subject.

**CHARACTERISTICS OF ANAHEIM DISEASE.**—Mission more susceptible than Mataro or Zinfandel.

Vines in shade of trees less rapidly affected.

Grafting the vines does not save them.

Cuttings from affected vines which show the disease die as soon as the parent vines.

Rotting of the roots is a constant symptom.

**CHARACTERISTICS SHOWN BY DYING VINES IN SANTA CLARA VALLEY.**—Mataro and Zinfandel have died more generally than the Mission.

Vine near trees have suffered as much or more than others.

All the recently grafted vineyards are healthy.

There are many instances in which cuttings taken



during the last two, three and four years from Mataro and Mission vines which are now dead have been planted, or grafted on phylloxera-resistant stock, and have now resulted in vigorous, healthy vines.

Roots of most of the injured vines are sound.

To these contrasts should be added the apparent recovery of Grenache vines, which were badly affected last year and this spring, but which in August were making a vigorous, healthy growth. Though Mr. Pierce may not make the statement definitely, the impression left, on reading his publications on the Anaheim disease, is that it is cumulative and progressive, and that the attacked vines never recover.

These contrasts prove either that the Anaheim disease is not the cause of the death of the Santa Clara vines, or that the characterization of the disease as given in the publication above referred to must be profoundly modified to include the symptoms exhibited by these vines. There is, however, no reason to suggest the Anaheim disease if, as seems at least very probable, the causes here outlined are sufficient to account for the observed effects.

**PRACTICAL LESSONS.**—This serious disaster contains two important practical lessons to horticulturists, and especially to vineyardists: First, the necessity of having on hand means for supplementing a deficient rainfall, even in what are usually considered the non-irrigating districts; second, the importance of choosing varieties adapted to special locations, soils and climates. This question of adaptation is particularly important to grape growers who are planting phylloxera-resistant stock, as all the good and thoroughly resistant vines are comparatively limited in their range of adaptability. Wherever new vines are planted in the devastated area it would be extremely unwise to plant any variety which has not well-proved drought-resisting qualities. The resistant vines which have shown the best results so far on the west side of the Santa Clara valley are Rupestris St. George, Rupestris Martin and Champini. The last has thriven almost or quite as well as the two Rupestris varieties, but unless it shows marked superiority in some other way the others are to be preferred on account of their superior phylloxera-resistant qualities and the greater ease with which they root.

## HORTICULTURE.

### State Fruit Growers' Convention.

The twenty-sixth State Convention of Fruit Growers of California will convene at San Francisco, in Pioneer Hall, under the auspices of the State Board of Horticulture, on Tuesday, December 3, 1901, and continue in session four days. A cordial invitation is extended to all fruit growers, and others interested in horticulture and kindred pursuits, to be present and take part in the proceedings of the convention, and it is to be hoped that every branch of the industry will be represented.

There are many problems that confront orchardists that can only be solved by the combined wisdom and energy of the great body of fruit growers working in harmony. Subjects of the utmost importance to the fruit industry in general will be considered, and all interested should take an active part in the matter and attend.

All fruit exchanges, associations, Granges and other associations of producers are requested to send representatives to this convention.

The Southern Pacific and the Santa Fe will issue excursion tickets to all persons going to the convention, and returning, at reduced rates, from all points on their lines to San Francisco, provided a receipt for the ticket purchased be taken at starting point.

The programme is given herewith in full:

Tuesday, December 3, 9:30 A. M.—Organization of the convention; address of welcome by Hon. James D. Phelan, Mayor of San Francisco; annual address by Hon. Ellwood Cooper, president; observations made at the Pan-American Exposition, by Hon. William H. Mills of San Francisco; appointment of committees, routine business, etc.

Tuesday afternoon, 1:30 o'clock.—Distribution, transportation, marketing fruits and fruit products. Report of the California Growers' and Shippers' Association, by H. Weinstock; "Distribution of Fruits," by A. H. Naftzger of Los Angeles, president and general manager of the Southern California Citrus Fruit Exchange; "Outlook for the Prune Industry," by William H. Aiken; "Future Trade Possibilities in Canned and Dried Fruits," by Isidor Jacobs; "The Deciduous Fruit Outlook in the San Joaquin Valley," by I. H. Thomas.

Wednesday, December 4, 9:30 A. M.—Organization and co-operation; "The Cured Fruit Association and What It Has Accomplished," by T. N. Woods; "Work of the California Fresh Fruit Exchange," by A. R. Sprague; "The Raisin Industry," "The Wine Industry, Its Future," etc., by W. J. Hotchkiss; discussion.

Wednesday afternoon, 1:30 o'clock.—Report of the permanent committee on transportation; continuation of the discussion on distribution and the co-operative systems now operating; railroad facilities, etc.

Thursday, December 5, 9:30 A. M.—"Advancement

of Women in Agricultural Pursuits," by Mrs. Emma Shafter Howard. The morning to be devoted to the ladies for talks and essays on horticulture and floriculture.

Thursday afternoon, 1:30 o'clock.—"Importance of the Work of the State Board of Horticulture," by President Benjamin Ide Wheeler of the University of California; "Selection, Natural and Artificial," by President David Starr Jordan of Leland Stanford Jr. University; "Report of the Committee on the Olive Prospect," by General N. P. Chipman; "The Evils of Present Methods in Selling the Olive and the Remedy," by C. A. Washburn of Los Angeles.

Thursday evening, 7:30 o'clock.—"The Fig," by Dr. Gustav Eisen; "The Orange in Southern California," by J. W. Jeffery; "The Orange in Northern California," by D. H. Murray; "The Almond," by Hon. Alden Anderson; "The Walnut, Its Future," etc., by F. E. Kellogg; discussion.

Friday, December 6, 9:30 A. M.—"County Horticultural Boards, and What They Have Accomplished," by H. P. Stabler; "Scale Insects and Their Parasites," by Edward M. Ehrhorn; "The White Flies of California," by Prof. C. W. Woodworth; "What California Has Done for Horticulture," by Alexander Crow; discussion.

Friday afternoon, 1:30 o'clock.—"Food Adulteration," by Prof. M. E. Jaffa; "The Oceanic Canal," by Edward Berwick; "Essay on Birds, in Their Relation to Agriculture and Horticulture," by W. O. Emerson.

### Lemon Pruning.

By CARLTON PEGLER, Sierra Madre, at the Pasadena Farmers' Club.

I have no particular method, as I understand the word as used generally in regard to pruning, having only had a trifle more than six years' experience, consequently would not be justified in forming a method in that length of time, though I believe we are all agreed on one point—that is, that we must prune in some way. Therefore I will try and explain a few points in regard to my way of pruning.

**REASONS FOR PRUNING.**—First, let me say, I have only two reasons for pruning at all, namely, to produce as large an amount of marketable fruit as possible per tree, and to produce it at the right time, and that, I believe, is what we are all trying for, though we may go about it in different ways. My first consideration in pruning is, first, to produce as large a tree as possible and still have the desired qualifications, as I am certain that it requires a large tree to produce a large amount of fruit.

Second, to form the tree as nearly as possible into the desired shape—and the shape, I believe, is the question lemon growers are most divided on. From my experience I find that a tree eight or ten years old should not be more than 10 or 12 feet high, with a diameter of 14 to 16 feet, and in appearance to resemble a half sphere as much as possible. The foliage should not be dense, but open enough to allow plenty of light and air to penetrate, so that fruit will be produced all through the tree and not just on the outside.

**NO OPEN CENTERS.**—I will say here that I do not believe in the open center or saucer-shaped tree, for three reasons: First, that the tree will not produce as many lemons; second, though there will be some fruit produced in that center and be protected from the wind, they will be directly exposed to the hot rays of the sun during the summer months and become sunburned, and that I consider worse than being slightly scarred, for a lemon that is only slightly scarred will sell as a choice or standard, where one that is sunburned is worthless; third, that the tree during a hard wind is in more danger of being broken than it would be with a full center. [The open center for any fruit tree is out of the question in a hot interior situation, though it may not be dangerous near the coast.—ED.]

**TIME TO PRUNE.**—The time to prune is a very important point, and should be given careful consideration, as it has an effect on the setting of the main crop. As we want most of our lemons to mature during the summer months, the trees should be pruned accordingly, and I find the best results come from pruning during the latter part of September or the first part of October. This allows two or three weeks for the tree to feel the effects, and blossoms may be expected early in November, which in eight months will have reached maturity and are ready for the first picking, which will be in June, with heavier ones in July, August and September. I am inclined to think that we do not get our lemons early enough in the season—the main pickings, I mean.

If the first picking does come a few weeks before the summer trade commences, I find it easier to store them than it is to force the ones that would naturally come in October into the September market.

**DON'T PRUNE TOO EARLY.**—Another thought occurs to me with regard to time that perhaps some are not aware of, and that is that the pruning should not be done during the summer, or, to be more explicit, before August 15; otherwise the trees will have to be gone over twice. If it is done before this, the trees will simply force out a lot of suckers and

make but very little natural growth, whereas, if done in the fall, though there will some suckers appear, the growth will be more natural, appearing all over the tree and of the kind that will produce fruit the following year.

**ADDITIONAL TREATMENT.**—Immediately after pruning I consider it very essential, in order to obtain good results, that the tree should have two treatments. First, a good commercial fertilizer should be carefully applied, followed by a thorough basin irrigation. The fertilizer should be carefully selected with regard to the requirements of the land. I do not believe in this system of having a commercial fertilizer adapted for every piece of land in southern California, regardless of location.

**SOME ADDITIONAL HINTS.**—The above covers the most important points in regard to pruning, but before closing I would like to add a few remarks on the actual work, as it may not come amiss to those who contemplate doing something in this line of work.

Pruning the trees round and smooth after the fashion of a cypress hedge, so that the appearance will be pleasing, is a proceeding I decidedly object to, as it is lemons and not looks we are pruning for.

If there are twigs that grow somewhat higher than others, let them remain, as they will bear fruit and bend down eventually.

**DON'T BUTCHER THE TREES.**—There is another objectionable feature, and that is, in plain words, butchering the trees, for I firmly believe that it is better not to prune enough than to prune too much.

One rule I find that should hardly ever be varied from is not to cut a limb in two. If there is anything to come out, follow it back to where it forks and take it out there. Suckers, of course, must come out by the roots, as it were, for cutting in two only makes matters worse, as they simply start out suckers again much thicker.

**GET A GOOD READY.**—In conclusion, I would say that before beginning to prune the first thing is for one to get a good idea of the kind of tree wanted, and in order to do this it is quite essential to take a short trip around the country, visiting different orchards, until one obtains a good idea of what he wants, and when once it is impressed upon the mind it is an easy matter to carry it into execution.

## FRUIT PRESERVATION.

### The Raisin Industry of California.

From the Crop Reporter, published by the Division of Statistics of the U. S. Department of Agriculture.

The average annual consumption of raisins in the United States for the past five years has been about 80,000,000 pounds, or not far from one pound per capita of population. Practically the total supply was produced in this country. In England the average annual consumption is upwards of five pounds per capita, and the total supply is imported from southern Europe.

Evidently the average rate of consumption in the United States is not important, but the raisin industry of this country forms a subject of considerable interest, because virtually the entire consumptive demand, which was formerly met wholly by importation, is now supplied by the single State of California—the only raisin-producing State in the Union.

**HISTORICAL.**—It is well known that no variety of native American grape has yet been developed suitable for the preparation of raisins. Over twenty-five years ago choice varieties of vines of the raisin grape were introduced into California from Spain, the country from which almost our entire imports of raisins were derived. The industry did not at once assume commercial proportions, but it is notable that as early as 1885—i. e., in the crop year ended September 1, 1886—the effects of increased production in California began to be shown in a decrease of imports. In the fiscal year 1885-86 imports declined to 40,387,946 pounds from 53,702,220 pounds only two years previous. Production in California, on the other hand, began in that year to assume commercial proportions for the first time, and amounted to 9,400,000 pounds, against 3,500,000 pounds in the previous year.

The impetus given to the industry at this time was never relaxed; production increased by leaps and bounds until in the crop year ended September 1, 1895, the high record mark was reached of 103,000,000 pounds. Naturally the effect upon imports of this remarkable increase of production was very marked, and in the fiscal year 1894-95 they had fallen to 15,921,278 pounds.

**THE PRODUCT.**—Since 1894 the production of raisins in California has declined; but this, it is claimed, has been due to adverse climatic conditions, and not to any decrease of interest in the industry. Production, however, has been almost equal to the demand; and, although imports have not wholly ceased, they are practically offset by exports of California raisins, which are now sent in small and, it may be said, experimental quantities to all parts of the world.

The following statement, giving the production of



raisins in California from 1886 to 1901 and the imports into all ports of the United States for the same years, illustrates how effectively that State has gradually monopolized the raisin trade of this country.

UNITED STATES PRODUCTION AND IMPORTS OF RAISINS.

Year.	Production, year ended Sept. 1 (a).	Imports, year ended June 30.
1886	9,400,000	40,387,946
1887	14,060,000	40,673,288
1888	16,000,000	40,476,763
1889	19,000,000	35,091,139
1890	25,000,000	36,914,330
1891	38,000,000	39,572,655
1892	52,000,000	20,687,640
1893	57,000,000	25,543,563
1894	85,000,000	13,751,050
1895	103,000,000	15,921,278
1896	91,360,000	10,826,094
1897	68,250,600	12,650,598
1898	93,704,000	6,593,833
1899	80,631,000	4,933,201
1900	71,568,000	10,309,428
1901	(b) 67,000,000	3,860,612

(a) Commercial estimate. (b) Preliminary estimate.

EXPORTS.—Exports of California raisins first became of sufficient importance to be separately stated in the official reports of the Treasury Department in the fiscal year ended June 30, 1898, and since that date the exports have been as follows:

EXPORTS OF RAISINS FROM THE UNITED STATES.

Year ended June 30.	Pounds.
1898	3,109,639
1899	4,659,807
1900	2,415,456
1901	3,530,164

THE RAISIN COUNTIES.—The raisin-producing section of California comprises ten counties—Fresno, Kern, Kings, Madera, Merced, Orange, San Bernardino, San Diego, Tulare and Yolo. It is estimated by some authorities that as many as 64,000 acres are devoted to the cultivation of the raisin grape in these counties. The city of Fresno, which is known throughout California as the "Raisin City," is the center of a section which produces about two-thirds of the entire output of the State. Eight months of sunshine and an abundance of water for irrigation make of this one of the ideal grape-producing sections of the world.

In the season of 1898-99 it is said there were sixty plants engaged in packing and seeding raisins in California, the majority of which were located in the Fresno district. These packing houses furnished employment in round numbers for 5000 hands. The aggregate amount paid out to the employees each month during the packing season was nearly \$250,000.

Experiments With Pickling Olives.

Mr. F. T. Bioletti reports to Prof. Hilgard the following summary of the results obtained in the recent series of experiments on pickled olives:

First.—By the method of using weak lye, with the addition of an equal amount of salt from the beginning, it is possible to pickle extremely ripe and even very soft olives with perfect success. Such olives have been kept in barrels for twelve months without perceptible deterioration.

Second.—It is possible to preserve these or other pickled olives for an indefinite time (two years at least) by heating them in preserving jars to a temperature of 80° C., even when the pickling solution contains not more than 5% of salt. There seems every reason to suppose that this same process could be applied to

olives in kegs, although, of course, the heating in order to penetrate the interior of the kegs would have to be somewhat prolonged.

Third.—Ripe pickled olives heated in preserving jars to 100° C. [the boiling point.—Ed.] were apparently uninjured in flavor or texture. There was, however, a certain extraction of color and a consequent coloring of the brine which rather detracted from their appearance. A heating to 80° was less harmful in this respect and was equally effective in preserving the fruit.

Fourth.—In pickling green olives the essential thing to be kept in view in order to preserve the green color is to neutralize the acrid principles with a single treatment of lye, care being taken not to expose the fruit to the air until all the bitterness has been extracted. Repeated weak solutions of lye have a tendency to darken the olives and injure the green color, while the strong solutions of lye have a tendency to bleach them.

Fifth.—In the treatment of ripe pickled olives, where it is desirable to darken the color of the olives, several treatments with weak solutions of lye are preferable to one treatment with a stronger solution. This darkening of the olives also has the effect of diminishing the difference of color between individual olives, thus making more uniform pickles.

THE sheep owners of the Montezuma Hills district have clubbed together in an effort to rid their sheep ranges of the coyotes which have created such depredations among their flocks. Dan McCormack, one of the prominent stock raisers, was at the head of the movement, and through his suggestion a bounty of \$45 has been offered by the sheep men for every coyote killed within specified limits. This is the highest bounty ever offered in the State for coyote scalps.

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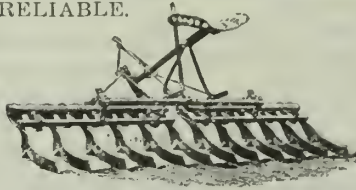


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## Agricultural Review.

### BUTTE.

**ORANGE PACKING.**—Oroville Register: At the Gardella packing house a force of packers are busy, seven being at work Tuesday packing fancy budded oranges. Joe Gardella expects to ship a carload of oranges to-day. He will pack and ship fully ten carloads this season. These have all been sold to the Atland Fruit Co. Lawrence Gardella will ship this fall fully twelve carloads of choice fruit, which has been sold to the same company.

**GRAPE SHIPMENTS.**—Oroville Register: J. H. Leggett shipped this season thirty carloads of grapes. He employed during the rush of the season 100 persons in picking, packing and boxing fruit. His Tokays were sent East while the other grapes, including numerous fine varieties, were shipped to many places along the Pacific coast from San Francisco to Dawson City.

### KINGS.

**SECOND CROP BARTLETT PEARS.**—Hanford Journal: A curiosity in the fruit line was recently brought into Armona from the Felicia orchard by John Bailey. It is a twig from a Bartlett pear tree, on which were bunched twelve second-crop pears, all matured and the most of them fine eating. Four of the pears had been knocked off, but the eight remaining weighed two pounds and two ounces, so the total weight of all must have been over three pounds.

**CURIOUS GROWTH OF ROSE BUSH.**—Hanford Journal: W. R. McQuiddy has had a rather curious development of nature in one of his rose bushes—a pink La France. A rose blossomed on the end of one of the stalks and withered away. The stalk kept on growing and ran out beyond the first rose and through it, and another rose, with accompanying leaves, blossomed as perfect as the first one, at the new end of the stock.

**RAISIN DELIVERIES.**—Hanford Journal, Nov. 16: Raisin deliveries are well in, but it is expected there will be a rush to get to the packing houses now, as the season will close this Saturday, according to the decree of the board of directors. After that the raisins delivered will be kept separate in the accounting. It has been estimated by a director of the association that there will have been delivered to the approved packing houses by the end of the season 2700 cars of raisins. This is figured on a basis of 3700 cars as the season's crop, and on the supposition that 1000 cars were handled outside of the association. Already according to estimate, 2400 cars have been received at the association packing houses, leaving only 300 to be delivered, and that fact serves to show how well advanced deliveries are. Advances have been made to the growers on those delivered goods at the rate of 2½ cents a pound. Of the goods delivered 1400 cars have been shipped out and the money received by the association. The crop being short and the prices being low, there will be no difficulty in selling the goods promptly.

### LOS ANGELES.

**SWIFT PLOWING.**—Pomona Progress: George A. Carter will the coming year have 250 acres in wheat just outside the western city limits, and he is now plowing the land with the fifty-two mules he got from Imperial. Five five-plow gangs pulled by eight mules each and two four-plow gangs pulled by eight mules each get over forty acres a day. Mr. Carter will not have over 200 acres of the land plowed by Friday night, but he must start the outfit for Imperial on Saturday morning.

### MARIN.

**MORE AYRSHIRE CATTLE.**—Brown & Brandon of Petaluma have just brought out from Minnesota two carloads of Ayrshire cattle, embracing some of the best strains in this country and Canada. The Novato Land Co., Marin county, has purchased seven head of these cattle for use on their ranch at Novato. The cattle are all registered stock and stood the trip across the country in good shape.

### NAPA.

**WINE OUTPUT AT GREYSTONE.**—St. Helena Star: Grape crushing at Greystone is finished. This was a busy season at that immense cellar. Besides the grapes purchased in this vicinity upwards of 2000 tons were brought to St. Helena by rail from Natoma. The season's output is about 350,000 gallons.

### ORANGE.

**GRAFTED WALNUTS.**—Santa Ana Blade: Postmaster J. T. Alexander has on exhibition for the inspection of friends a sample of softshell walnuts from grafted stock and the nuts are most remarkable, both in point of size and quality of the meat, and in inviting appearance, as they are as bright in color as if bleached. The

nuts are larger than the ordinary walnut, and are uniform in size. Mr. Alexander has a 20-acre orchard of these trees, but they are yet only two years old and not in full bearing. In a year or two more he will likely have one of the most profitable walnut orchards in the county.

**MORE NEERNUT COLTS SOLD.**—Santa Ana Blade: P. M. Johnson has purchased a couple of Neernut colts belonging to G. W. Ford. The colts are three and four years old, coal black and fine actioned, and Mr. Johnson was captivated with them.

### SAN BENITO.

**HAY BALING.**—Hollister Bee: The hay baling season is about over. Several presses, of course, claim to have done the most work. Nobles Bros. & Washington seem to have the drop on the championship of 1901, as their press baled 3300 tons. Antone Pankey carries the belt as the man who pitched the largest number of tons into a press this season. Mr. Pankey says his trusty fork has sent over 3400 tons of hay through the presses. The hay crop tributary to Hollister figures up 28,000 tons; for the county about 38,000 tons.

### SAN BERNARDINO.

**THIS BEET CROP AND NEXT.**—Chino Champion: Beet harvest is finished and the last load from the Chino fields has been shipped to the factory. Beet slicing at Oxnard is over for the season and the great factory there is closed. The total worked there is in the neighborhood of 165,000 tons. Manager Schroeder says that the applications are coming in well for contracts for next year, especially from Orange and Los Angeles county points. Some 400 or 500 acres will be grown at Calabasas, in Los Angeles county. At Oxnard applications are already closed for 18,000 acres, which is the full capacity of the factory there, and it is expected that the crop from fully 1000 acres there will be shipped to Chino factory. The full quota of 10,000 acres is practically assured now for the Chino factory.

### SAN BENITO.

**GROWING WHEAT ON RENTED LAND.**—San Benito Advance: The unusual condition of affairs exists in this country today in regard to farming land. Farmers on rented land have learned by bitter experience that the longer they work rented land the poorer they get. When wheat was worth \$1.50 a cental and the yield was good, renters could afford to pay a quarter of the crop delivered. With wheat below \$1, the renter pays his rent and is just out his labor each season. This fact was patent to the careful observer years ago, but in the fierce competition for rented land profits were overlooked, and, where there have been any at all, have been swallowed up by the landlords. A fourth of the crop would be a reasonable rent, if divided and delivered on the land; but when the tenant is compelled to pay for the landlord's sacks, threshing and hauling, he generally comes out the little end of the horn.

### SANTA BARBARA.

**BIG SUGAR RUN.**—San Luis Obispo Tribune: The Union Sugar Company, whose factory is located near Santa Maria, is having one of the best runs this season it has ever had since its construction. The yield of sugar has averaged 1000 sacks per day. On Wednesday all former records were smashed by an output of close on to 1200 sacks. Five hundred and seventeen tons of beets were ground up in twenty-four hours. The company expected to close the season at the end of the present month, but with the vast amount of beets still in the field, it will require fully thirty days more.

### SANTA CLARA.

**SHIPPING OLD PRUNES.**—Gilroy Gazette: John R. Trimble of the Cured Fruit Association was in town on business connected with the shipment of 500 tons of prunes of the 1900 crop which have been lying here in the receiving station. The Packers' Association own the fruit and are shipping it to San Jose, where it will be processed and boxed for market.

**PRUNE GROWERS HAPPY.**—Tillman, Bendel & Co. of San Francisco are reported having absorbed the San Jose Fig-Prune Cereal Co., and within a few days will begin the erection of a large manufacturing plant in that city. Fig-prune cereal is a substitute for coffee and is composed largely of prunes. For this reason residents of prune growing sections are interested in its manufacture. It is stated that the product will be advertised largely in the East and a big trade is anticipated.

**MORE INQUIRY FOR PRUNES.**—San Jose Mercury: While all dealers and shippers are cautious in their statements it appears that there is much more inquiry for prunes for the last three or four days. That there is some disposition to buy is shown by the fact that many inquiries are

being received by wire. Some small shipments are being steadily made both by the big packers and by the association. While prices are not satisfactory for the fruit seller, the increasing inquiry for the fruit is encouraging. All other varieties of dried fruit are very much nearer cleaned out than usual for this season, and as all reports agree on the smallest apple crop in the East for many years, local shippers expect to see an advance of the prune market.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajarian: Packers are now "taking stock" of their supply of Newtowns, and they are of the opinion that the crop will run a less percentage of merchantable apples than was first estimated.—The crop of Bellefleurs, which was larger than estimated early in the summer, has kept packers so busy that most of them have had but little time to pack Newtowns. The four-tier Bellefleur stock is almost cleaned out. There are yet several carloads of smaller sizes to market.—A. N. Judd has been experimenting with new varieties of apples which he had sent him from Arkansas. He has fruit from the Senator, a small red apple, a good keeper and nicely flavored; and the Shannon, of light color, medium size and sharp taste. These apples, especially the Shannon, are very popular in the Southwestern States. From the samples shown by Mr. Judd, and the report he gives of their yield, they promise to do well in this valley.

### SUTTER.

**PRUNING IN ORCHARDS COMMENCED.**—Sutter Independent: The orchard men would like to see a few heavy frosts to knock off leaves and permit pruning. In a few orchards some pruning is being done, but in most cases the leaves are too thick for this work to be carried on successfully.

**PRUNE TREES IN BLOOM.**—Sutter Independent: The prune trees on the farm of J. H. Roberts continue to bloom. We noted the fact of the trees on the high ground being in bloom some weeks ago. One day last week Mr. Roberts brought in a limb taken from a tree on his low land which was in full bloom. He fears there will be no fruit on the trees next season, and is unable to account for their blooming this fall.

**MORE HORTICULTURAL FREAKS.**—Sutter Independent: In addition to the blooming of prune trees on the Roberts and Hausinger orchards and the blooming and ripening of raspberries on the Bunce place in October, previously noted in these columns, W. F. Peck now has an almond tree on his place in town in full bloom.

### TEHAMA.

**SEEDING 200 ACRES PER DAY.**—Red Bluff News: On D. S. Cone's farm seeding and harrowing is being pushed as swiftly as possible. Mr. Cone is using his large oil-burning traction engine for doing the work, and his harrows are so arranged that they break and turn the clods a width of very nearly 100 feet at each round of the engine, and 200 acres are harrowed per day. He has sent for a large and brilliant headlight, which is expected daily, and when this is received he will put on a night shift and run the harrows all night.

### TULARE.

**A PROFITABLE TWO ACRES.**—Register: J. M. Smith has a patch of a little more than two acres—just a few rods over—in which alfalfa was sown last winter. It had been in barley the year before and a volunteer crop of barley came up in advance of the alfalfa and yielded seven tons of good grain hay, six of the loads being weighed and the seventh approximated. In addition he has taken six tons of alfalfa hay off the tract this season and could now cut two tons more. The land was irrigated but once. Mr. Smith's place is 3 miles east of Tulare City.

**THE HONEY YIELD.**—Visalia Delta: M. J. Rouse of this city will handle nearly the entire output of honey from Tulare county this year, as he has done in past years. He already has six cars ready for shipment. He places the product of the county this season at fifteen carloads, a marked increase.

**MONEY IN HOGS.**—Visalia Delta: The price of hogs has dropped several points. On Monday buyers were offering \$5.15 to \$5.25 in this county. One prominent buyer stated that the presence of cholera in one or two places in the county had nothing to do with the drop in prices. The California market is controlled by Chicago. The big prices offered up to this time have tempted growers to send in everything available, cutting in on their stock of reserve hogs. This has had the effect of bringing down prices for the present, but it insures big money for next year. However, even at 5 cents, a grower states that a man who has a good start in the hog business, with proper facilities to

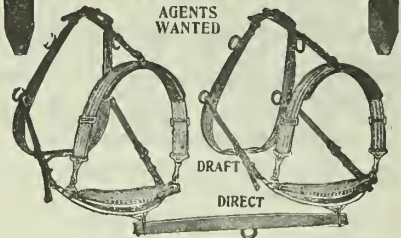
carry it on, has something better than a gold mine.

### YOLO.

**PROFITABLE CREAMERY.**—Yolo Mail: The directors of the Woodland creamery, at their last monthly meeting, declared a dividend of 8%, payable Dec. 25. On the 15th inst. the sum of \$5600 was paid out to the patrons. The creamery has enjoyed a very prosperous season.

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## THE HOME CIRCLE.

## Johnny's Questions.

Johnny's strapped his books and slate, and started off to school;  
He's enjoined to study well and mind the teacher's rule;  
He's advised to con his books and every lesson learn,  
So that he may thrill the land when it comes his turn.  
That is why his father has a most unpleasant task—  
He must find the answers for the questions John will ask.

"Why don't water run up hill? Why don't scarecrows fly?  
When was Julius Caesar born? How'd he come to die?  
Give a list of Presidents. Where is Reykjavik?  
How is it that seven days only make a week?  
How do you spell phthisis, pa? Who was in the ark?  
Where does all the daylight stay while we're in the dark?"

"Why do pickles make boys sick? When was Moses born?  
Pa, how many kernels is in a grain of corn?  
Pa, who was it held the pass at Thermopylae?  
Was it like a circus pass? What is Labor Day?  
Pa, what does a oyster eat? Do they live in beds?  
Does the little oysters' mas have to comb their heads?"

"What is germs? The teacher says they're on pencils, and  
Must be antiseptized 'fore they touch our hand.  
She says they must be removed, or 'twill never do.  
Are they like us little boys—chew the pencils, too?"  
Then his pa will drop his book, and in accents deep  
Say: "It's time that boys like you were in bed asleep."

—Baltimore American.

## A Timely Arrival.

Robert Benton sprang up the stoop, and was about to ring the bell, when he suddenly checked himself. There was an air around the house that struck him as peculiar. The shades in the front were pulled down, and there was not a ray of light to be seen in any of the windows.

The front door was slightly open, however, and after a few moments' hesitation he stepped into the vestibule without ringing the bell. Here he was amazed to find the second door wide open, but the hall and stairway beyond were in total darkness. He was satisfied now that something was decidedly wrong.

He had come down from Melton expecting to find the family at home, and to spend a pleasant evening with Edith Fenton, his affianced, who was staying for two weeks with her aunt, Mrs. Barrington. The latter was a wealthy widow with one daughter. They resided in the handsome brown stone front in the vestibule of which Robert was now standing, listening for some sound within. He had received a letter from Edith in the morning, telling him her aunt and cousin were going out that night, and would not return till late, and inviting him to spend the evening with her.

For more than two minutes Benton strained his ears to catch some sound, but all was quiet.

"What shall I do?" he asked himself. "I'm sure there are burglars inside. And where can Edith be?"

He was about to call out when a ray of light flashed down from the upper hall checked him, and he cautiously advanced to the foot of the stairs and looked up. At the same moment another flash burst through the darkness, and he saw the shadowy form of a man moving along the upper hall toward the rear of the house. Then he knew that the light was made by a dark lantern. He also knew that no time was to be lost if he would save the house from being robbed.

Unfortunately he was not armed, and it would be foolhardy to attempt to

capture the robber alone. And there might be more than one. He quickly decided to summon a policeman, and was going out to call him, when he heard footsteps coming up the basement stairs. Before he could reach the door whoever was approaching would gain the top, and see him as he turned the angle of the stairs.

While he hesitated, the coming man reached the hall and came toward the front door, springing forward as he saw it was open. A muttered curse fell from his lips, and he whistled sharply, at the same time closing the door and flashing the dark lantern he carried around him. Robert, however, had hastily ensconced himself behind the heavy curtains that hung before the large folding doors leading into the parlor, and thus avoided discovery. Presently he heard the man in the upper part of the house coming rapidly down stairs, evidently having heard the warning whistle sent up by his confederate.

"What's the matter?" he asked.

"I just found the front door open. Some one has either come in or is watching us. Where have you been for the last ten minutes?"

"In Mrs. Barrington's apartment on the second floor, and the storeroom on the top."

"Then if any one has entered he must be on the floor above, for I was down stairs all the time getting the silver plate together, and I know no one came there. There may be nothing in the door being open. I am not sure that I shut it tight when I let Mrs. Barrington and her daughter out. Let us hurry up with the work. They'll be back in three hours, and we must get all the silver together, and you fellows'll have to hustle with it as quick as you can. It'll take some time to bind me and upset the room a bit to show that a struggle has been had. Come on."

From all this Benton saw that it was Mrs. Barrington's butler who had planned the robbery, and in spite of the peril of discovery he chuckled to himself as he thought how fortunate had been his arrival. But where was Edith?

"Are you sure the girls are safe?"

"Yes, they're bound and gagged. Bill and me attended to that when you first let us in. One is a bute. Who is she? Not a servant?"

"No; that's Mrs. Barrington's niece, and she's a smart one. We've got to be careful. You're sure she don't know I'm mixed up in this?"

"Not she! I made it a point to say to Bill that we had the butler bound and gagged, and the coast was clear now. So let's hurry it along. You get the things together, and I'll stay here and watch. Bill ought to be back soon for another load."

"All right; wait here, and I'll soon finish up stairs."

Saying this, the speaker returned to the top of the house, while his confederate remained on guard in the lower hall. Robert, meanwhile, scarcely dared to breathe. He knew that the robber was listening for the least noise and that a slight move might betray his proximity.

Just how it happened Benton was never able to determine. But in some way his hand suddenly came in contact with one of the brass knobs attached to the end of the curtain strings, and an instant later he was horrified to hear it strike the panel of the door with a loud noise. In that instant he realized that discovery was sure, and like a flash of lightning he decided on his course.

He knew the burglar would warn his confederate instantly, but even before the warning note had time to form in his throat Robert threw aside the curtain and leaped forward, striking with all his strength at the point where he knew the marauder's head ought to be. It was a fortunate blow. It caught the man full in the face, and he sank like a log, Robert catching him to prevent him from striking the floor with too much noise.

He quickly secured the robber's revolver, then listened intensely to see if the fellow above had been startled by the slight commotion. All was

quiet. Throwing back the curtain, Robert silently opened the door and dragged the insensible thief into the room; then, cutting away the thick curtain cords, he securely bound him hand and foot.

By this time the fellow began to regain his senses. Robert bent over him and hissed in his ear:

"If you attempt to move or make the least noise, I'll blow out your brains—mind that!" And the cold muzzle of the revolver pressed against his head emphasized the threat. "I am going to shut you in here and capture the others, but if you forget what I told you and make a noise, I'll kill you so quick that you won't know it."

He drew near the doors and placed himself behind the curtains, just where he could reach out and attack the other outlaw when he came down stairs. He was armed now, and did not fear him. But while he was waiting he must not forget "Bill" whom the other two expected to return. It ought to be pretty nearly time for him to arrive, and Benton began to fear that he would put in an appearance while he was engaged with the man from above. With the thought came an idea that made him fairly jump.

"I believe I can do it!" he muttered. "I'll try it, anyhow."

He leaned forward and gave a sharp, penetrating whistle, like the one he had heard the burglar send out some time before. Instantly there was a noise in the top of the house, and the second robber could be heard descending the stairs two at a time. Reaching the lower hall, he called cautiously, "Where are you?" pausing close to where Benton stood.

"Hush!" hissed Benton, and the fellow sank to the floor with a groan as the butt of the revolver crashed down upon his head.

In less than two minutes he was lying beside his confederate, bound and gagged. The latter was watching Robert with blazing eyes, but he made no attempt to move, and with another warning to him, Benton closed the door and made arrangements for his last capture.

He had hardly taken up his position when he heard some one coming up the stoop and a moment later enter the vestibule.

"Hello!" sounded softly from that point.

Robert hesitated about replying, and the fellow did not venture into the house. Evidently becoming suspicious, he flashed his lantern down the hall. He could see nothing, of course, then once more he called out in guarded tones:

"Hello, Wesley. Where are you?"

Seeing that he would not come in unless answered, Robert replied, trying to imitate the voice of the butler:

"Here; come down in the basement."

"Is everything all right?"

"Yes; come on."

The man entered and walked along the hall toward the stairs. As he passed him Robert raised his pistol and aimed a fierce blow at his head; but his arm became entangled in the thick folds of the curtain and the force of the blow was destroyed. The noise reached the robber's ears, and he leaped aside.

"What's up?" he cried, and quickly turned his light full on Benton just as the latter, realizing that it must now be a hand to hand encounter, sprang upon him.

He was borne to the floor and the lantern knocked from his grasp, but he quickly recovered himself, and, with a savage oath, began struggling desperately with his assailant. Benton soon saw that the rascal was fully, if not more, than a match for him.

From side to side through the hall the combat waged, each trying his utmost to master the other, the robber slowly forcing the fight toward the front door. Robert still held the revolver. He tried to bring it to bear on his adversary, but the fellow suddenly struck his arm and the pistol was knocked from his hand. It hit the floor and was discharged.

"Curse you!" hissed the robber. "That'll bring the police down upon

us. Who are you, anyway?"

"You'll find out soon," panted Robert.

Sure enough, in a few seconds footsteps were heard rapidly approaching. The thief put all his strength in the one effort to break away, and contrived to throw off Robert's hold. At the same moment the policeman reached the stoop and sprang up the steps.

Quick as thought the thief turned upon Benton, threw his arms around him and shouted:

"For heaven's sake, officer, help me! I've caught a burglar."

Another policeman arrived just as the first one pressed the button in the wainscoting and lighted the hall gas. As the light flared up, the burglar called out:

"Hurry up! He's getting away."

The officers promptly laid hold of Robert, who was so amazed at the unexpected action of his opponent that for a moment he was unable to speak. The robber cried excitedly:

"Fasten the outside door! There's another one in the basement."

With a quick leap he passed the unsuspecting officers and reached the street. Then Benton recovered himself.

"You fools!" he yelled. "You've got the wrong man! That fellow is the thief. I have two more bound and gagged in the parlor. You've allowed the third to escape."

"The deuce!" cried one of the policemen, and he promptly started in pursuit; but the marauder had made the most of his opportunity and was nowhere in sight.

When the chagrined officer returned he found Benton and the other policeman standing over the men in the parlor, while the former was explaining the situation. This done, the robbers were bound in a manner that precluded all possibility of their escape; then, having shut and locked the front door, they all went upstairs to see what mischief had been done.

"I suppose they've got away with most of the plunder," said one of the officers.

"I don't think they have taken more than one load," said Robert. "I interrupted them before they had time to complete the job."

His anxiety, however, to rescue his sweetheart from discomfort or danger was so great that he did not give much attention to the plunder question, but bounded up the stairs to the floor above, and entered one room after another until he came to the apartment where Edith lay bound and gagged. To remove the gag and free her hands and feet was the work of only a few minutes; and as she stood up with a cry of delight, the policeman entered the room.

"How did it happen?" asked Robert.

"I can hardly tell. I was expecting you, and had come up to dress when two men suddenly entered and bound and gagged me before I had time to know what had occurred. But you must rescue the maid and butler. I'm afraid the poor fellow is hurt. I heard one of the robbers say—"

"Poor fellow, indeed!" interrupted Robert. "He's the scoundrel who planned the whole business. We've got him safe enough, never fear. But let's find the maid."

The latter was discovered in her room on the top floor, secured as Edith had been. When she was released she promptly began to shout hysterically.

"Be still!" said one of the officers, gruffly. "You should have done that yelling at the time you were attacked."

"Sure, and I didn't get the chance," she naively returned.

Without going into further details I may add that the butler and his confederate were taken to jail, where they made a confession that resulted in the capture of the other robber, and the restoration of whatever valuables had been stolen. And to this day Mrs. Robert Benton considers her husband a hero.—Waverly Magazine.

MRS. CRIMSONBEAK—"Don't the big fish in the sea eat the little ones?"  
Mr. Crimsonbeak—"Yes, they, like us, are taught to love one another."



## Gold and Gray.

I told you once, sweet wife, long years ago,  
When all our blood thrilled with a youthful glow,  
That in the whole wide world naught could compare  
To the wild glory of your golden hair.

Now a far other vision seems to rise.  
Nay! start not, dearest, with such wondering eyes.

A deeper beauty I have learned to see:  
That silver-gray far dearer is to me.

—A. M. Orpen, in Chamber's Journal.

## What a Small Vice Costs,

"How can you afford all these books?" asked a young man, calling upon a friend. "I can't seem to find spare change for even the leading magazines."

"Oh, that library is only my 'one cigar a day,'" was the reply.

"What do you mean?" inquired the visitor.

"Mean? Just this: When you advised me to indulge in an occasional cigar several years ago, I had been reading about a young fellow who bought books with money that others would have burned in cigars, and I thought I would try to do the same. You may remember that I said I should allow myself one cigar a day?"

"Yes, I recall the conversation, but don't quite see the connection."

"Well, I never smoked, but I put by the price of a 5-cent cigar every day, and as the money accumulated I bought books—the very books you see."

"You don't mean to say that your books cost no more than that? Why, there are dollars' worth of them?"

"Yes, I know there are. I had six years more of my apprenticeship to serve when you advised me to 'be a man.' I put by the money, which at 5 cents a day amounted to \$18.25 a year, or \$109.50 in six years. I keep those books separate as a result of my apprenticeship cigar money, and if you'd done as I did you would by this time have saved many, many more dollars than I have, and would have been better off in health and self-respect besides."—Success.

## Dust and Disease Germs.

Cleanliness and health go hand in hand, whether cleanliness and godliness do or not. The way to keep a kitchen clean is to keep it free from disease germs—that is to keep our food which is cooked in the kitchen free from unwholesome elements, which cause it to spoil and to be unwholesome when eaten.

The clothes we wear should be brushed free from dust, because the air is full of impure germs. Those who work in dirty, dusty factories or other places like them should have their clothes beaten every day after they come home. Grease spots should be carefully cleaned off working clothes, because such grease spots hold dust, and may become culture places for impurities received from the air. If proper precautions are exercised and the house is kept as clean as it is possible to keep it the health of the inmates will be good.

There is a great difference between a thing being scientifically clean and clean in the ordinary understanding of the term. A house filled with the germs of the tuberculosis may be clean to all appearances, and one which has just been disinfected scientifically may have indelible stains of previous wear and tear on the walls and carpets, yet one is a wholesome dwelling and the other is not clean.—Tribune.

THE palm for absent-mindedness should be accorded to a learned German professor. One day he noticed his wife placing a bunch of flowers on his desk. "What do they mean?" he asked.

"Why," she exclaimed, "don't you know that this is the anniversary of your marriage?"

"Ab, indeed, is it?" said the professor, politely. "Kindly let me know when yours comes around and I will return your attention in kind."—Collier's Weekly.

## DOMESTIC ECONOMY.

## Hints to Housekeepers.

An omelet smothered in a cream sauce thick with chopped olives and mushrooms is delightful for a Sunday night supper.

Chopped herbs of any kind of which the flavor is desired make the mayonnaise tartare. Chopped onions or their juice, chopped olives, chives, cucumber pickles and capers added to a plain dressing transform it into the tartare.

Green pea salad is one of the possibilities of the season. Dice a cupful of cold veal or chicken, and place on a bed of lettuce or cress. Cover with two cupfuls of peas, drained well from the liquor. Pour over the whole a French dressing, seasoned with prepared mustard and mint leaves.

String beans, covered with French dressing, sprinkled with chives and seasoned with salt and pepper, make an excellent salad. A macedoine salad of beets, carrots, peas, cold boiled and sliced potatoes, string beans and asparagus tips in a combination comprising any or all of these mentioned may be treated in the same manner.

A housekeeper who has made the experiment discovers that matting may be sewed like carpet and put down better and easier than in the usual way with matting tacks. Undoubtedly this method would increase the wear of the matting if it were necessary to take it up often. One or two liftings of matting are apt to tear it unless the greatest care is used.

Bread griddle cakes serve not only as a means of disposing of leftovers, but are delicious if well made. Soak two cupfuls of breadcrumbs in two cupfuls of scalding milk over night, having the milk scalding hot when it is poured over the bread. In the morning rub the crumbs through a sieve or potato ricer. Add a tablespoonful of melted butter, the well-beaten yolks of two eggs, a cupful of flour, a half teaspoonful of salt and two teaspoonfuls of baking powder. Add the stiffly-beaten whites of the eggs and cold milk if the batter needs thinning. Bake on a moderately hot griddle.

The best apron for occasional use in the kitchen is made of straight lengths of gingham sewed together in a piece wide enough to easily envelop the figure. The bottom and sides are hemmed. Openings are cut at the top for the arms, the two sides being connected over the shoulder by a double bias band. The neck, both back and front, is straight and is gathered into a facing. The distance between the openings for the arms should be determined by the width required at the foot of the skirt. Three or four buttons and buttonholes close the back. The beauty of these aprons is that while they are quickly made they protect the gown at the back as well as at the front, and prevent the waist from being spattered while beating eggs, batter, cream and the like.

A cabbage, hollowed out and prettily garnished makes a pretty salad receptacle. A round, solid head should be selected, and all the ragged outer leaves be removed. Cut a slice from the bottom, so that the head will stand firmly. Then take out the interior, leaving the wall about an inch thick. Make a dressing of one-half cupful of vinegar (mild, not sharp), two teaspoonfuls of sugar, a little paprika, one-half teaspoonful each of salt and mustard, one teaspoonful of flour, the yolk of one egg and a quarter of a cupful of butter. Rub the butter and flour to a cream, add the vinegar and seasonings, and cook five minutes. Pour over the well-beaten yolk. When it is cold, dress with it the cabbage removed from the inside of the head, which has been chopped fine. Fill into the cavity in the cabbage. Place the head on a large round plate or platter, and garnish around the bottom with parsley. Arrange stuffed olives around the top of the shell. A red cabbage is sometimes used for the shredded white kind.

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# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Nov. 20, 1901.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	71½@71¾	74½@75¾
Thursday.....	72½@72¾	75½@75¾
Friday.....	72½@72¾	75½@75¾
Saturday.....	72½@72¾	75½@75¾
Monday.....	72½@71¼	76 @75½
Tuesday.....	71¾@71¼	74½@75¾

### CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	38½@39¼	40 @40¾
Thursday.....	39½@40	40¾@41¾
Friday.....	39½@40¼	41 @41¾
Saturday.....	40½@39¾	41½@40¾
Monday.....	38½@39¾	40½@40¾
Tuesday.....	39½@39¾	40¾@41¾

### SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 00 @—	1 04½@1 04½
Friday.....	1 00 @1 00½	1 04½@1 05½
Saturday.....	1 00½@1 00½	1 04½@1 05
Monday.....	1 00½@1 00½	1 04½@1 04½
Tuesday.....	1 00½@1 00½	1 04½@1 04½
Wednesday.....	1 01½@1 01	1 05½@1 05½

### WHEAT.

The wheat market in this center has continued slow since last review, and in the main unfavorable to the selling interest. Although freight rates by sea have been on the decline for some weeks past, and have taken a decided tumble from the somewhat lofty perch they occupied a few months ago, wheat is failing to command materially better figures than when freight rates were at their highest notch. Wooden ships have been lately chartered for grain carrying as low as 22s 6d per ton to Europe, usual option as to final port of destination. This is the equivalent of about 27s 6d for iron ships, although no charters of iron vessels have been effected at latter figures, so far as reported. There is probability, however, of iron ships going at 25s before the season closes, and at this rate ship owners will be faring better than the average wheat grower at present prices. It would be gratifying to be able to state that prospects for higher prices for wheat were as good as the prospects for lower freight rates. While this is not out of the line of probability, there is at the moment no clear cut trend of the wheat market in the direction mentioned. There was an increase in the United States visible supply east of the Rockies this week of 3,716,000 bushels. At this writing (Wednesday noon) the speculative market showed more firmness than at any previous date since last report.

California Milling.....	1 02½@1 05
Cal. No. 1 shipping, alongside.....	98½@1 00
Oregon Valley.....	98½@1 01½
Washington Blue Stem.....	1 00 @1 05
Washington Club.....	97½@1 00
Off qualities wheat.....	92½@ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s3d@6s3½d	5s10½d@5s11d
Freight rates.....	40@42½s	31½@32½s
Local market.....	98½@1 01½	98½@1 01½

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.00@1.01½.
May, 1902, delivery, \$1.04½@1.05½.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.01½@1.01; May, 1902, \$1.05½@1.05½.

### FLOUR.

Fair average quantities are moving outward to South American and Oriental ports, and trade on local account is of about usual proportions, but there is no trouble experienced in filling orders. More buyers than put in an appearance could be accommodated. Prices are without quotable change, the market presenting an easy tone.

Superfine, lower grades.....	\$2 25@2 40
Superfine, good to choice.....	2 50@2 75
Country grades, extras.....	3 00@3 25
Choice and extra choice.....	3 25@3 50
Fancy brands, jobbing.....	3 50@3 65
Oregon, Bakers' extra.....	2 75@3 15
Washington, Bakers' extra.....	2 75@3 25

### BARLEY.

Although shipments for the season have been comparatively heavy, aggregating to date by sea over 140,000 tons, the market fails to develop any pro-

nounced strength, quotable values continuing in much the same position as for several months past. It is altogether probable that the outward movement for the next six months will be much lighter than it has been since July 1st, the foreign demand from brewers and maltsters being invariably most urgent in the early part of the season. Inquiry on local account was principally from millers for feed descriptions, with enough offering to enable them to secure all they required without paying any advance on previous rates.

Feed, No. 1 to choice.....	72½@ 75
Feed, fair to good.....	70 @ 72½
Brewing, No. 1 to choice.....	75 @ 82½
Chevalier, No. 1 to choice.....	92½@1 00
Chevalier, poor to fair.....	75 @ 85

### OATS.

The demand is not very brisk at full current figures, but buyers are unable to obtain material concessions in their favor. The quantities arriving from Oregon and Washington are not as heavy as many have been anticipating. Choice seed oats continue in fair request, mainly Reds and Blacks, and in a small way are bringing an advance on wholesale quotations.

White Oats, fancy feed.....	1 25 @1 30
White, good to choice.....	1 15 @1 20
White, poor to fair.....	1 00 @1 10
Gray, common to choice.....	1 10 @1 20
Milling.....	1 15 @1 25
Surprise, good to choice.....	1 25 @1 30
Black Russian.....	95 @1 20
Red.....	1 07½@1 25

### CORN.

Present offerings are not large and are wholly domestic product, the local market being now lower than the Eastern. The demand is slow, however, and at the reduced figures the market displays no special firmness.

Large White, good to choice.....	1 35 @1 45
Large Yellow.....	1 25 @1 35
Small Yellow.....	1 40 @1 50

### RYE.

Values remain at a low range, with offerings larger than the immediate demand.

Good to choice, new.....	72½@ 77½
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### BUCKWHEAT.

Nothing of consequence doing in this cereal, and little other than the views of local millers upon which to base quotations.

Good to choice.....	1 60 @1 70
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### BEANS.

A leading feature of the bean market the past week has been the rather firm tone for Large Whites or Lady Washingtons and Bayos, with the positive demand running mainly on these two varieties. Several dealers are reported to have shorted the market heavily, prior to the opening of the season, particularly of Large Whites, selling the same the past summer through Eastern brokers for October delivery. It is understood that default in delivery has been made on large quantities of the beans thus contracted for, but what the final outcome will be has not yet developed. Limas are ruling steady. Values for Pinks are not being very well maintained. Reds and Black-eyes are being offered very sparingly.

Pea, fair to good, 100 lbs.....	3 25 @3 50
Small White, good to choice.....	3 15 @3 35
Lady Washington.....	2 90 @3 10
Pinks.....	2 01 @2 25
Bayos, good to choice.....	2 40 @2 60
Reds.....	3 00 @3 25
Red Kidney.....	3 00 @3 50
Limas, good to choice.....	4 50 @4 75
Black-eye Beans.....	3 25 @3 75
Garbanzos, large.....	2 00 @2 25
Garbanzos, small.....	1 25 @1 50

### DRIED PEAS.

Not much doing in either Green or Niles. The latter are in lightest stock and are commanding relatively the best figures.

Green Peas, California.....	1 25 @1 75
Niles Peas.....	1 50 @1 60

### WOOL.

Considering the quantity offering, and the time of year, there is about as much doing in the wool market as could be reasonably expected. Sales effected are at figures much the same as have been ruling for some weeks past, but for other than choice free wool the market is not noteworthy for firmness. Present offerings are principally heavy and defective fleeces.

### SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @15
Oregon Valley, coarse to medium.....	12 @13
Eastern Oregon, choice.....	11 @13
Eastern Oregon, fair to good.....	9 @10
Nevada, as to condition.....	10 @12

### FALL.

Humboldt and Mendocino.....	11 @12
Northern Mountain, free.....	9 @10
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @10
San Joaquin and Plains.....	6½@ 8½
San Joaquin Lambs.....	7½@ 9

### HOPS.

There is scarcely any inquiry of a wholesale character, either on local account or for shipment. Quotations are based mainly on asking prices. To effect free sales, lower figures would have to be accepted.

Good to choice, 1901 crop.....	10 @12
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### HAY AND STRAW.

There have been no pronounced changes in the general tone or in quotable values of the hay market since date of last review. Arrivals were tolerably free, but showed some decrease as compared with a week or two preceding. A large proportion of the hay now offering is under choice, and for seriously defective stock, whether the damage be from rain or other cause, the market is slow and weak. Straw is not in heavy supply and is commanding steady rates.

Wheat, good to choice.....	9 00@12 00
Wheat and Oat.....	8 00@11 50
Oat.....	6 50@ 9 50
Barley and Oat.....	6 00@ 8 50
Barley.....	6 00@ 8 50
Volunteer.....	5 50@ 7 50
Alfalfa.....	8 00@10 00
Clover.....	5 50@ 7 50
Stock.....	5 00@ 6 00
Compressed.....	9 00@12 00
Straw, bale.....	35 @47½

### MILLSTUFFS.

As anticipated in our last review, prices for the whole line of mill offal have been tumbling, and bid fair to be soon down to quite reasonable figures. Values for Milled Corn are also on the downward trend. Rolled Barley ruled steady.

Bran, ½ ton.....	16 00@17 00
Middlings.....	18 00@20 00
Shorts, Oregon.....	16 50@17 50
Barley, Rolled.....	16 50@17 00
Cornmeal.....	30 00@31 00
Cracked Corn.....	20 00@30 00

### SEEDS.

Not much Mustard Seed of any description now offering and market is firm at the rates quoted. Some Flaxseed is coming forward, mostly representing prior arrival purchases. In quotable values for bird seed there are no changes to record, market being quiet.

Flax.....	2 65@3 25
Mustard, Yellow.....	3 25@3 40
Mustard, Trieste.....	3 00@3 15
Canary.....	3¼@ 3½
Rape.....	1¼@ 2¼
Hemp.....	3¼@ 3½

### BAGS AND BAGGING.

This market is dull and uninteresting, a condition generally experienced at this time of year. Quotable values remain nominally as previously noted.

Calcutta Grain Bags, spot.....	7¼@—
San Francisco Grain Bags, 22x36, spot.....	7 @—
Wool Sacks, 4 lbs.....	31 @36
Wool Sacks, 3½ lbs.....	33 @31
Fleece Twine.....	8¼@—
Gunnies.....	—@—
Bean Bags.....	5½@ 5¾
Fruit Sacks, cotton, three sizes.....	5½, 6, 6½
Fruit Sacks, Jute.....	7 @ 7½

### HIDES, PELTS AND TALLOW.

In quotations for Hides there are no changes to record, but market is firm at prevailing values. Pelts are going at generally unchanged rates, although the demand at top figures cannot be termed brisk. Tallow is not lacking for custom, and is bringing fully as good prices as have been lately current.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	11 @—	9½@—
Medium Steers, 48 to 56 lbs.....	10 @—	8½@—
Light Steers, under 48 lbs.....	9 @—	8 @—
Heavy Cow Hides, over 50 lbs.....	9½@—	8½@—
Light Cow Hides, under 50 lbs.....	9 @—	8 @—
Stags.....	8½@—	—@—
Wet Salted Kip.....	9 @—	8 @—
Wet Salted Veal.....	9 @—	8 @—
Wet Salted Calf.....	10 @—	9 @—
Dry Hides.....	16 @—	14 @—
Dry Kip and Veal, 11 to 16 lbs.....	15 @—	13 @—
Dry Calf, under 4 lbs.....	17 @—	15 @—
Salted Horse Hides, large.....	2 50 @—	—@—
Salted Horse Hides, medium.....	2 00 @—	—@—
Salted Horse Hides, small.....	1 00 @—	—@—
Dry Horse Hides, large.....	1 75 @—	—@—
Dry Horse Hides, small.....	1 25 @—	—@—
Dry Colts' Hides.....	50 @—	—@—
Pelts, long wool, ½ skin.....	75 @—	100 @—
Pelts, medium, ½ skin.....	50 @—	75 @—
Pelts, short wool, ½ skin.....	30 @—	40 @—
Pelts, shearling, ½ skin.....	15 @—	30 @—
Deer Skins, best summer.....	35 @—	—@—
Deer Skins, good medium.....	—@—	30 @—
Deer Skins, thin winter.....	—@—	20 @—
Elk Hides.....	10 @—	12 @—
Tallow, good quality.....	5 @—	5½ @—
Tallow, No. 2.....	4 @—	4½ @—
Goat Skins, perfect.....	30 @—	37½ @—
Goat Skins, small.....	10 @—	20 @—
Kid Skins.....	5 @—	10 @—

### HONEY.

Stocks in this center are of moderate volume, both of Comb and Extracted.

Some heavy shipments have been recently made Eastward direct from points of production. Current values are being well maintained, with some sales in a small way at a higher range of prices than quoted.

Extracted, White Liquid.....	5¼@ 6
Extracted, Light Amber.....	4¼@ 5
Extracted, Amber.....	4 @—
White Comb, 1 lb frames.....	10 @12
Amber Comb.....	7 @ 9
Dark Comb.....	6 @ 7

### BEEFWAX.

There is no lack of inquiry, but offerings are of light volume. Market is firm at the quotations.

Good to choice, light, ½ lb.....	25 @28
Dark.....	24 @25

### LIVE STOCK AND MEATS.

The improved figures last quoted for Beef are being well maintained. Mutton is selling at slightly firmer prices than lately current, the supply proving hardly equal to the demand. Lamb is meeting with a moderately firm market, but is mostly too large to be desirable. Veal is not in excessive receipt and is meeting in the main with advantageous sale. Hogs have been arriving rather freely, but packers have not materially reduced bids.

Beef, first quality, dressed, net ½ lb.....	6¼@ 7
Beef, second quality.....	6½@—
Beef, third quality.....	6 @—
Mutton—ewes, 6½@7c; wethers.....	7 @ 7½
Hogs, hard grain fed, 150 to 250 lbs.....	5½@—
Hogs, small, fat.....	5¼@—
Hogs, large, hard, over 250 lbs.....	5½@—
Hogs, country dressed.....	7 @ 7½
Veal, small, ½ lb.....	7 @ 9
Veal, large, ½ lb.....	8 @—
Lamb, spring, ½ lb.....	8 @ 8½

### POULTRY.

The poultry market as a whole showed fairly good condition, especially as compared with several weeks preceding. Eastern was in reduced receipt, being more firmly held at primary points. Turkeys sold at a sharp decline, immediately following last review, owing to excessive receipts of California product, especially of dressed stock, with unfavorable weather. Next week Turkeys will be in active request on account of Thanksgiving and prospects are that good fat birds will bring good prices. It is not likely that any Eastern Turkeys worth mentioning will be received here for the Thanksgiving trade.

Turkeys, dressed, choice.....	14 @ 16
Young Turkeys, full grown.....	12½@ 14
Hens, California, ½ dozen.....	4 00 @5 00
Roosters, old.....	4 00 @4 50
Roosters, young (full-grown).....	4 00 @5 00
Fryers.....	4 00 @4 50
Broilers, large.....	4 00 @4 50
Broilers, small.....	3 50 @4 00
Ducks, old, ½ dozen.....	3 50 @4 00
Ducks, young, ½ dozen.....	4 00 @5 00
Geese, ½ pair.....	1 50 @1 75
Goslings, ½ pair.....	1 75 @2 00
Pigeons, old, ½ dozen.....	1 25 @1 50
Pigeons, young.....	1 50 @1 75

### BUTTER.

There is no improvement to record in the general condition of the butter market. Fresh is arriving rather freely for this time of year, and is not in very active request, especially at full current figures. Dealers are carrying considerable quantities of cold storage and packed butter, and are desirous of effecting a clean-up of stocks of the same within the next sixty days.

Creamery, extras, ½ lb.....	26¼@—
Creamery, firsts.....	23 @—
Creamery, seconds.....	20 @—
Dairy, select.....	22 @—
Dairy, firsts.....	20 @—
Dairy, seconds.....	18 @—
Mixed store.....	14 @16
Creamery in tubs.....	19 @21
Pickled Roll, ½ lb.....	19 @21
Firkin, California, choice to select.....	18 @20
Firkin, common to fair.....	16 @17½

### CHEESE.

Market is showing decided firmness, especially for mild new of high grade, with stocks and offerings light. Values are likely to be on a tolerably high plane for some weeks to come. Eastern markets are correspondingly firm.

California, fancy flat, new.....	12½@13
California, good to choice.....	11½@12
California, fair to good.....	11 @11¼
California, "Young Americas".....	13 @13½

### EGGS.

Fresh eggs which were uniformly large, white and in every way suited to the wants of the best trade, were in light receipt and in a small way brought tolerably stiff prices. Fresh eggs which were irregular as to size and color were not much sought after, even at comparatively low figures. Cold storage eggs are now being extensively used, and of the same there are ample supplies.

California, select, large, white and fresh.....	43 @—
California, select, irregular color & size.....	35 @40
California, good to choice store.....	25 @30
California, common to fair store.....	—@—
Eastern, good to choice.....	24 @29
Cold Storage.....	22½@27½



## VEGETABLES.

Arrivals were rather light in the aggregate, and tendency of prices for most kinds, especially best qualities, was in favor of the selling interest. Onions commanded a further advance, and prospects good for a continuance of firmness. Green Peas of fine quality were scarce and high. Green Okra was higher. Tomatoes were in fairly liberal receipt, with offerings mostly under choice, and for defective stock the market was weak.

Beans, String, # lb.	3 @ 4
Beans, Lima, # lb.	3 @ 3 1/2
Cabbage, choice garden, # 100 lbs.	50 @ 75
Cauliflower, # dozen	40 @ 50
Cucumbers, Bay, # large box	40 @ 65
Egg Plant, # box	40 @ 65
Garlic, # lb.	2 @ 2 1/2
Okra, Green, # box	75 @ 90
Onions, Yellow Danver, # cental.	1 50 @ 2 00
Peas, Sweet garden, # lb.	4 @ 5
Peppers, Green Chile, # sack	35 @ 50
Peppers, Bell, # box	40 @ 65
Squash, Marrowfat, # ton	8 00 @ 10 00
Summer Squash, Bay, # large box	1 00 @ 1 25
Tomatoes, # large box	30 @ 60

## POTATOES.

There was a further hardening the past week in values for desirable shipping grades of potatoes, with increased inquiry from Eastern points and offerings not particularly heavy. Business on local account was of fair average volume, fancy Burbanks bringing tolerably stiff figures from the most exacting local trade. Indications are that at no time during the balance of the season will values for good to select potatoes be any more favorable to buyers than at present date.

Burbanks, Salinas, # 100 lbs.	1 30 @ 1 60
River Burbanks in sacks, # cental.	85 @ 1 05
Petaluma and Tomales Burbanks	1 10 @ 1 30
Oregon Burbanks	1 25 @ 1 50
River Reds	1 30 @ 1 50
Sweets, new, # cental	70 @ 80

## The Fruit Market.

## FRESH FRUITS.

Apples were in fair supply, but the proportion of offerings showing choice to select quality were not large. Tendency on superior stock was to higher figures than have been lately ruling. Some fancy Spitzenberg, four ties to the box, were held up to \$2, but this figure was not obtainable in a way to be warranted as a regular or wholesale quotation. Common qualities of apples were without quotable improvement, moving slowly at unchanged figures. Pears were not in large supply, but only choice to select table stock, such as fine Winter Nelis, were especially sought after or could be depended on to command good figures. Persimmons which were ripe and in every way desirable sold in a limited way to tolerably fair advantage, but not many were required to satisfy the inquiry. Pomegranates were in limited stock and not very active request, prices ruling much the same as preceding week. Grapes arriving were mostly in poor condition, as is to be expected at this advanced date, with recent rainy weather. For grapes in prime to choice condition the market was moderately firm, but seriously defective qualities found very poor custom and had to go in the main at low figures. Berries made a light showing, and where the quality was all right met as a rule with a firm market; especially was this the case with choice to select Longworth Strawberries.

Apples, fancy, # 4-tier box	1 25 @ 1 75
Apples, good to choice, # 50-lb. box	60 @ 1 00
Apples, common to fair, # 50-lb. box	40 @ 60
Figs, # 2-layer box	75 @ 1 00
Grapes, Cornechon, # crate	50 @ 75
Grapes, Black, # crate	40 @ 75
Grapes, Muscat, # crate	40 @ 75
Grapes, Tokay, # crate	50 @ 1 00
Grapes, large open boxes	1 00 @ 1 50
Pears, Winter Nelis, # 40-lb. box	75 @ 1 50
Pears, other kinds, # box	50 @ 1 00
Persimmons, # box	50 @ 1 00
Pomegranates, # box	60 @ 1 00
Quinces, # box	30 @ 50
Raspberries, # chest	5 00 @ 7 00
Strawberries, Longworth, # chest	9 00 @ 10 00
Strawberries, Large, # chest	3 00 @ 5 00

## DRIED FRUITS.

The market for evaporated apples shows the same firm tone as previously stated, with no lack of inquiry in this center and offerings light for this time of year. Much of the product of interior packing houses is being forwarded out direct. Demand for apples is both on speculative and European account, due to decided shortage in the crop East, where prices are on a higher plane than here, although the same may be said of the Eastern grading, as the best California stock cannot be made to take the place of fancy Eastern apples from Northern States. California can beat the outside world on nearly all kinds of deciduous fruits, but not on apples, when it comes to strictly high grade evaporated. Sun-dried apples are tending against buyers, in sympathy with evaporated, but for other than most desirable qualities the market for sun dried cannot be termed noteworthy for firmness. In apricots, peaches and pears there

is little other than a moderate jobbing trade doing, with no appreciable changes in quotable values, although for peaches and pears, other than most select, there has been some shading of prices in favor of buyers. Figs are moving fairly well at generally steady values, especially the better grades. Prunes show no quotable improvement, nor is there any noteworthy movement. Business in prunes is mainly within range of 2 1/2 @ 3c. for the four sizes, the smaller sizes going mostly on the 3c. basis, being in lighter stock and commanding relatively better figures than large prunes. New Santa Claras are being held in the main above the present market, the prunes now moving being principally new from outside districts and 1900 crop Santa Claras.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime	7 @ 7 1/2
Apricots, Royal, choice, in sacks, # lb.	8 @ 8 1/2
Apricots, Moorpark	10 @ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy	8 @ 8 1/2
Apples, 50-lb boxes, rings, pressed, good to choice	6 @ 6 1/2
Figs, pressed	5 1/2 @ 7
Nectarines, # lb.	5 @ 6 1/2
Peaches, unpeeled, fancy	7 @ 7 1/2
Peaches, unpeeled, choice	6 @ 6 1/2
Peaches, peeled, in boxes	12 @ 14
Pears, halves, choice to fancy	6 @ 8 1/2
Plums, Red and Black, pitted	5 @ 6
Plums, White and Yellow	5 @ 6
Prunes, 4 sizes, in bags, 2 1/2 @ 3c; 50-80s, 3 1/2 @ 4c; 60-70s, 3 1/4 @ 3 1/2 c; 70-80s, 2 1/2 @ 3c; 80-90s, 2 1/4 @ 2 1/2 c; 110s and less, 1 1/2 @ 2c; these figures for 1901 crop.	

## COMMON SUN-DRIED.

Apricots	6 @ 6 1/2
Apples, sliced	3 @ 5
Apples, quartered	3 1/2 @ 4 1/2
Figs, Black	2 1/2 @ 3 1/2
Figs, White	3 @ 3 1/2
Peaches, unpeeled	5 @ 6
Pears, prime halves	5 @ 6
Plums, unpitted, # lb.	1 1/4 @ 2 1/2

## RAISINS.

The raisin market shows good condition so far as movement is concerned, but prices are without improvement. Most of the crop has been placed. There are moderate quantities of seeded raisins and medium grades of loose Muscatels still offering. The Fresno raisin season nominally closed on the 16th inst., but, as previously announced, goods delivered to the Association after that date would be separately accounted for, in order to facilitate the keeping of individual accounts. The Association has paid 2 1/2c. advance, but the advance is now reduced to 1 cent. The raisin crop, it is expected, will be entirely housed within a week or ten days.

Following are the prices for new crop, as fixed by the Fresno Association:

Loose Muscatels—	Per lb.
4-crown	4 1/2
3-crown	4 1/2
2-crown	3 1/2
Seedless Muscatels	4 1/2
Seedless Sultanas	5
Thompson's Seedless	6
Bleached Thompson's—	
Extra Fancy	11
Fancy	10
Choice	9
Standard	7 1/2
Prime	7
Seeded—	
Fancy	6 1/2
Choice	5 1/2
London Layers, 20-lb boxes—	
2-crown	1 10
3-crown	1 20
4-crown	—

## CITRUS FRUITS.

Oranges are in fairly liberal supply, but it is the exception where the fruit is sufficiently ripe to be desirable. Offerings of unripe oranges and cool, damp weather have combined to make the market slow and weak. Well colored Navels of desirable sizes brought \$3 per box. Small and green Navels were obtainable down to \$1.50 per box. The Lemon market was without quotable change as to asking figures, but lacked strength, the movement being slow. Limes were in good supply and cheap.

Oranges—Navels, # box	2 00 @ 3 00
Seedlings, # box	1 25 @ 2 00
Tangerines, # 1/4 box	1 00 @ 1 50
Lemons—California, select, # box	2 50 @ —
California, good to choice	1 75 @ 2 25
California, common to fair	1 00 @ 1 50
Grape Fruit, # box	1 50 @ 2 50
Limes—Mexican, # box	4 00 @ 4 50

## NUTS.

There is a fair movement in Almonds and Walnuts at generally unchanged figures, although in some instances prices are being reported slightly shaded to buyers rather than miss sales; that much desirable stock will be on hand after the holidays is not probable. Peanut market is not heavily stocked and values are ruling steady.

California Almonds, shelled	17 @ 20
California Almonds, paper shell, # lb.	10 1/2 @ 12
California Almonds, soft shell	7 1/2 @ 9
California Almonds, hard shell	5 @ 6
Cal. White Walnuts, No. 1 soft shell	9 @ 9 1/2
Cal. White Walnuts, No. 2 soft shell	7 @ 7 1/2
Cal. White Walnuts, No. 1 hard shell	8 1/2 @ 9
Cal. White Walnuts, No. 2 hard shell	6 1/2 @ 7
Cal. Chestnuts	7 @ 10
Peanuts, California, fair to prime	4 1/2 @ 5 1/2

Peanuts, Eastern, hand-picked	5 1/2 @ 6
Pine Nuts	5 @ 6

## WINE.

The market remains practically the same as previously noted, presenting a firm tone, but with no noteworthy offerings from first hands. There is virtually nothing now doing in a wholesale way. It is probable that the market for this year's dry wines will open at 20 @ 25c. per gallon, with prospects of selections selling at a little higher range. Dry wines of last season's vintage are quotable at 25 @ 30c. per gallon wholesale, and transfers of superior qualities are reported in a limited way up to 35c. per gallon. Last year's product is now mainly in second hands. There is a moderate movement outward of blended wines, both by sea and rail.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks	141,751	2,833,711
Wheat, centals	361,128	2,742,074
Barley, centals	213,605	3,492,584
Oats, centals	30,350	517,943
Corn, centals	1,145	28,253
Rye, centals	11,200	50,808
Beans, sacks	78,677	408,601
Potatoes, sacks	36,387	575,347
Onions, sacks	4,371	125,838
Hay, tons	3,901	65,526
Wool, bales	980	37,244
Hops, bales	60	4,904

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks	55,432	1,942,938
Wheat, centals	320,766	2,354,405
Barley, centals	254,062	2,712,537
Oats, centals	—	2,117
Corn, centals	17	8,013
Beans, sacks	719	16,404
Hay, bales	200	4,940
Wool, pounds	—	511,316
Hops, pounds	25,939	268,766
Honey, cases	117	4,422
Potatoes, pack's	1,859	18,186

## California Dried Fruit at New York.

NEW YORK, Nov. 20.—Evaporated apples, common, @ 8c; prime wire tray, 8 1/2 @ 9c; choice, 9 1/2 @ 9 1/2 c; fancy, 10 @ 10 1/2 c.

California Dried Fruits.—Market is quiet and presents an easy tone.

Prunes, 3 1/2 @ 7c.  
Apricots, Royal, 8 1/2 @ 13c; Moorpark, 9 @ 13c.  
Peaches, unpeeled, 6 @ 9 1/2 c; peeled, 11 @ 15c.

## FRANK DALTON CO.,

Shipping and Commission Merchants.

—DEALERS IN—

BEANS, POTATOES, GRAIN, DRIED FRUITS, DECIDUOUS AND CITRUS FRUITS.

Car Lots a Specialty. Send Samples.

224 CLAY STREET, SAN FRANCISCO.

## Turkeys Wanted.

Send your LIVE and DRESSED TURKEYS and LIVE CHICKENS to the old reliable firm, who guarantees Top Market Prices and Quick Cash Returns. Established 1887.

CONSIGNMENTS OF ALL KINDS OF PRODUCE. CORRESPONDENCE SOLICITED.

BLUM, MORRIS & CO., General Produce Commission Merchants, 210-212 Davis Street, San Francisco, Cal.

## Live and Dressed Turkeys Wanted.

Drop us a postal, we will give you the correct market on Turkeys at any time. If correct weights, prompt returns, and the highest market rates are what you want, try us.

VON RONN, LORSBACH & CO., 313-315 Front Street, San Francisco, Cal.

Telephone, RED 531. P. O. BOX 2180.

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TURKEYS WANTED. POULTRY AND GAME a Specialty. CONSIGNMENTS SOLICITED. N. E. CORNER WASHINGTON AND FRONT STS., SAN FRANCISCO, CAL.

Telephone, MAIN 649. Established Over 19 Years.

SHERRY & CO., GENERAL COMMISSION MERCHANTS, AND WHOLESALE DEALERS IN BUTTER, CHEESE, EGGS, NUTS, HONEY, POULTRY, POTATOES, DRIED FRUITS, BEANS, ONIONS, HIDES, and all kinds of Farm and Dairy Produce.

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General Commission Merchants. POULTRY, EGGS, GAME, POTATOES, BEANS, GREEN AND DRIED FRUITS.

GRAIN, PRODUCE AND WOOL. Account Sales and Check Weekly for All Consignments. 117-119 Washington St., SAN FRANCISCO.

UNDER date of the 12th inst., Chas. A. Stowe writes from Stockton, Cal., "I consider the PACIFIC RURAL PRESS the best advertising medium for my business on the Pacific coast."

**A READY BUILT FENCE**  
A better fence than you can build, all ready to stretch and staple. The  
**ELLWOOD STEEL WIRE FENCE**  
is low in price, high in quality—lasts a lifetime. Fully guaranteed. Sold everywhere. If your dealer hasn't it, write to  
AMERICAN STEEL & WIRE CO., Chicago, New York, San Francisco, Denver.

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We ask all reasonable builders to compare P & B Building Paper with other papers—compare texture, tensil strength, its odorless qualities—compare every part of it.

Then buy the best.

We are willing you should put P & B Building Paper to the test.

It is the best building paper used by builders everywhere—we think you will say so, too, after comparison.

Send for booklet.

Paraffine Paint Co. 116 Battery Street, S. F., Cal.



## Your Horse



may "throw a curb," "start a splint," "sprain a cord," "develop a spavin, thrush, or grease heel," etc. They are all bad, but don't be alarmed. Get a bottle or two of

### Tuttle's Elixir.

It cures all these troubles and Colic, Distemper, Founder, Pneumonia, &c. Used and endorsed by Adams Express Co.

Dr. S. A. Tuttle, Wolcott, Vt., July 15, 1898.  
Dear Sir:—I have doctored horses for the last 25 years, and I think your Elixir the best liniment I have ever used, and I would recommend it to any one.

C. M. GUYER.  
TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

Tuttle's Elixir Co., 88 Beverly St., Boston, Mass.  
437 O'Farrell St., San Francisco, Cal.  
Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters. They offer only temporary relief if any.

## Patrons of Husbandry.

### Tulare Grange.

TO THE EDITOR:—Tulare Grange met at its hall on Saturday, the 16th, and was called to order at 11 A. M.

After reading minutes of last previous meeting, allowance of bills and other routine business, on motion the Worthy Master was requested to prepare an address on the Order of Patrons of Husbandry, to be read at the next meeting, Dec. 7th, when Grange birthday will be observed.

The Worthy Master then declared a recess until 1 P. M. After an excellent lunch the subject of the day, "Books and Newspapers in the Home," was taken up and discussed.

Sister Morris led off speaking from memorandum, followed by Sister Slaughter, who was followed by Sister Rosson, who read a paper on the subject. Sister Rosson's paper was clear, of a high literary style, and was exceptionally good. A general discussion took place in which nearly, if not quite, every member took part. All agreed books and newspapers fill a very important place in the home if such are of a character suitable for the moral, cultured home, and none other should be admitted thereto. In books, well written history, books of travel, poetry and many good works of fiction were recommended for the true home, but the yellow covered dime novel was utterly condemned as a pest. In magazines many excellent ones are now published, and by combining the poorest homes may have the enjoyment of them. The Review of Reviews, Outlook, Public Opinion, Little's Living Age, Harper's Magazine, Scribner's and many others were spoken of as a selection which should be in the home. In weekly papers The Youth's Companion, and some of those before mentioned, were well recommended. For a State weekly paper, for the farmers' home, the PACIFIC RURAL PRESS, as a high standard agricultural paper and for its excellent home department, was given high commendation, and the opinion was expressed it would be commendable to have it in every home and should be in every farm home in California; In daily papers the yellow journal was utterly condemned, and it was regretted the largest circulating dairies of the State are of that description. The Sacramento Record-Union was commended as a clean paper, not tainted with yellow journalism, and giving in a reliable manner all national, State and market reports and news. For local papers we have in our own county as good as there are in the State, the Register of Tulare being one of the best, as is the Times of Visalia.

Children should have picture books, as they first attract their attention, and then simple stories and tales to read. They should be encouraged to read aloud.

It was said by some, and admitted, that children of the present time have, in the variety, cheapness of literature and educational facilities, great advantages over those of fifty years ago. It was also admitted that fifty years ago, as a rule, children's stories were better selected, with much fewer objectionable ones. Paul and Virginia, Elizabeth and the Exiles of Siberia, Peter Parley's Tales of the Sea, were

read by children then and made good moral impressions.

The question box was now opened and the following questions found in it were given the answers stated:

What is the most profitable stock to raise on the farm? First cost, expense and care considered, chickens.

What is the most profitable crop raised on the farm? Alfalfa, good drying peaches and grapes each had its advocate.

What is the best method of feeding milk to poultry? Milk in any form is good poultry feed. No poor way.

How shall I start eucalyptus trees? What soil is best adapted to them? Start the seed in a box, when 6 inches high set out. They do well in any good soil. Visit the U. S. Experimental Station, 1½ miles southeast, and learn for yourself.

Is a Postal Savings Bank a desirable thing? A most desirable thing for the nation, as it has a tendency to disseminate interest amongst people of small means at home and to give such people a greater interest in their government, and a good thing for the depositor; it stimulates thrift and gives the depositors greater confidence in the security. They are a good thing, a necessity, and will come eventually.

What is the proper amount of seed wheat that should be sown per acre? There are many conditions to be considered. In rich, bottom, damp lands as high as eighty pounds per acre is good; in dry, hog wallow or sandy land as low as twenty-five pounds per acre is enough. Good land, well pulverized, all foul vegetation killed out, crop sown after the first rain, seeded according to conditions of land and season, will bring a paying crop.

The National Lecturer's subject for next meeting, Dec. 7th: "What influence is exerted by the rightly conducted farm home upon the character and success in life of boys and girls raised in those homes?" The discussion will be led by Sister Slaughter, who will read a paper.

Tulare Grange programme subject is, "The Value of Farm Accounts." On this subject four sisters and four brothers have been requested to speak.

J. T.

## Soft Harness

You can make your harness as soft as a glove and as tough as wire by using EUREKA Harness Oil. You can lengthen its life—make it last twice as long as it ordinarily would.

## EUREKA Harness Oil

makes a poor looking harness like new. Made of pure, heavy bodied oil, especially prepared to withstand the weather.

Sold everywhere in cans—all sizes.

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**Farm Wagons.**

28-30-32 and 34" Wheels with 4 and 5" Tires.

Make a Good Low Down Truck Out of Your Old Wagon at a Good Low Down Price.

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CONTRA COSTA COUNTY LAND FOR SALE. Send for list. D. J. WEST, Martinez, Cal.

## You Can Save Your Horse

from Spavin, Ringbone, Splints, Curbs and all forms of Lameness by a prompt and liberal application of that old reliable and well known remedy—

### Kendall's Spavin Cure

It has the unqualified endorsement of every man who has ever used it. Here is a sample of what thousands say for it.

**CURED FIVE BONE SPAVINS.**  
Montrose, Colo., July 14, 1899.  
Dr. B. J. Kendall Co., Dear Sir:—Please send me one of your "Treatise on the Horse." Your Kendall's Spavin Cure is the best in all the world. I have cured five bone spavins on my horse and would not be without it for anything. Yours truly, G. W. ROBUCK.

It is a most valuable liniment for family use—splendid for bruises, sprains, lame back, rheumatism, etc., etc. Sold by all druggists at \$1; six bottles for \$5. Our book, "A Treatise on the Horse," mailed free. Write at once and address

**DR. B. J. KENDALL CO., Enosburg Falls, Vt.**

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AT THE PAN-AMERICAN EXPOSITION

### The United States Cream Separator

HAS WON  
**GOLD MEDAL OR THE HIGHEST AWARD**

at Every International Exposition at which it has been exhibited since its invention.

Our "would-be competitors" are advertising extensively as follows:

"The supremacy of the DeLaval machines at Buffalo is a continuation of their triumphant record at all previous great exhibitions."

Yes, this supremacy (?) is a continuation of their triumphant (?) record, and that record shows the "triumphant supremacy" was

**IN WIND BUT NOT IN WORK**

Mr. Edward Van Alstyne, Supt. of Model Dairy at the Pan-American, states, under date of Nov. 1st, "I find since the receipt of your letter, after carefully going over the figures of the seventy-one runs of their (the DeLaval) machine that I mis-called the figures, and the reading should be .0172 instead of .0161."

**NOW READ WHAT THE UNITED STATES SEPARATOR DID IN THE MODEL DAIRY**

Mr. Van Alstyne states in reference to the work done by the United States Separator in the Model Dairy at the Pan-American Exposition, from Sept. 29th to Oct. 30th, inclusive, that in the fifty separate runs made by that separator during these days, with the milk of the ten different herds in the dairy test, the average per cent. of fat left in the skimmilk was .0138.

DeLaval average test of skimmilk	.0172
United States average test of skimmilk	.0138
Difference in favor of the United States	.0034

This shows that the DeLaval separator left 25 per cent. more butter fat in the skimmilk than the United States—an immense waste that amounts to a very large sum of money upon the dairy products of the world. Enough to pay for a United States Separator to replace every DeLaval Separator now in use.

Perhaps our chagrined and "disgruntled would-be competitors" "with characteristic advertising honesty" will undertake to bluff this statement off, but it remains true and is a matter of record that cannot be successfully denied.

On the practical every-day work

**THE UNITED STATES SEPARATOR STANDS WITHOUT A PEER**

The most thorough Separator in the world  
**Vermont Farm Machine Co., Bellows Falls, Vt.**

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MENTION THIS PAPER.

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SAN JOSE, - CALIFORNIA.



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**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**JERSEYS, HOLSTEINS & DURHAMS.** Bred specially for use in Dairy. Thoroughbred Hogs, Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**PETER SAXE & SON,** Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**J. H. GLIDE,** Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A.J.C.C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

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**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**"SNOW WHITE" GOBLERS** for sale by C. A. Stowe, 330 N. Grant St., Stockton, Cal.

**WILLIAM NILES & CO.,** Los Angeles, Cal. Nearly all varieties chickens, geese, ducks, peafowl, etc.

**SANTA TERESA POULTRY FARM,** Eden Vale, Santa Clara Co., Cal. Illustrated catalogue with show record for 1900, free. Agents Eclipse Aluminum Leg Bands; sample 2 cts.

**FOR BREEDING** Hare and Poultry in small lots, address Cottonwood Farm, Pleasant Grove, Cal.

**MEAT MEAL.** Best quality. Lowest price. A. Warren Robinson, Napa, Cal.

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**BERKSHIRE, POLAND-CHINA & DUDOC HOGS.** Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**POLAND-CHINA PIGS** by Sweepstakes Boar at State Fair 1901. None Better. S. P. Lindgren & Sons, Kingsburg, Fresno Co., Cal.

**W. R. McCASLIN,** Cosumnes, Sacramento Co., Cal. A1 breeder of Poland-China Hogs.

**DR. R. CAUW,** Carpinteria, Cal. Registered Berkshire Hogs for sale.

**P. H. MURPHY,** Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**CHAS. ASHLEY,** Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

### BREEDERS' SUPPLIES.

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We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Publishers of the Pacific Coast Poultryers' Hand-Book and Guide. Price 40c, postpaid.

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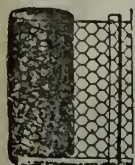
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### FLEMING'S LUMP JAW CURE

Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the absolute cure of Lump Jaw, free if you ask for Pamphlet No. 277. Fleming Bros., chemists, Union Stock Yards, Chicago, Ill.



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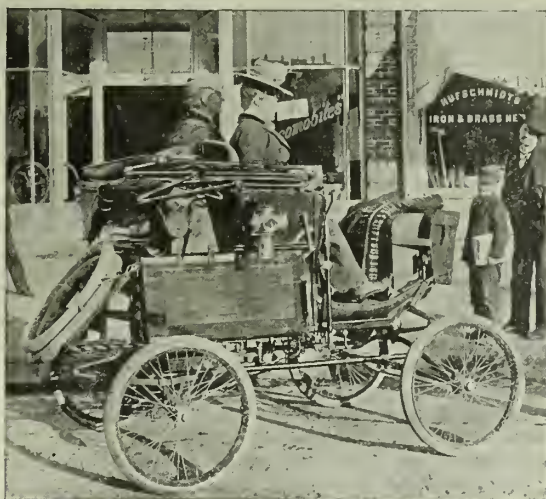
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Single Blackleg Vaccine } Powder Form.  
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Single Blacklegine } Vaccine ready for use.  
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Blacklegine Outfit (Needle with handle), 50c.

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Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are high. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

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SLEEPY HOLLOW RANCH, SAN ANSELMO, MARIN CO., CAL.

ALL THE LEADING FAMILIES OF THE BREED

Every Sire directly imported from Herds of the Greatest Eastern Breeders.

Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams.

Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.



## STATE FAIR VISITORS

knew good pigs when they saw them and our sales were much larger than in any other year, which has reduced our stock to a small number.

We have a few pigs ready to ship and other litters coming on.

We won a large number of premiums which show the character of the herd. We still claim to have the best large herd on the coast and are adding new animals when we find good ones.

Persons wanting good pigs should get in their order early to get a choice of litters.

Correspondence solicited.

SESSIONS & CO., 117 E. 23rd St., LOS ANGELES, CAL.

## HUMBOLDT STOCK FARM,

JOSEPH MARZEN,

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Breeder of SHORTHORN AND HEREFORD CATTLE.

Young Stock for Sale.

LOVELOCK, NEVADA.

## BUFFALO PITTS SPIKE TOOTH HARROW.

THE ONLY SPIKE TOOTH HARROW SUITABLE FOR ORCHARD OR VINEYARD.

NOTICE THE FRAME—IT WILL NOT HARM THE TREES OR VINES.

Made in 2, 3, 4 or 5 sections.

ASK YOUR DEALER FOR IT.

BAKER & HAMILTON,.....SAN FRANCISCO, BENICIA, SACRAMENTO, LOS ANGELES.

## GLENN RANCH,

Glenn County, :::: California,

## FOR SALE

### In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

**F. C. LUSK,**

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

## Southern Pacific.

## SHORT LINE

—FROM THE—

EAST to CALIFORNIA.

FEWEST MILES

AND

FEWEST HOURS

Perfectly Conducted Tourists' Excursions  
from Principal Cities of the East in  
New Upholstered Tourist Cars.

SPLENDID LIMITED TRAIN SERVICE via  
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Ask near SOUTHERN  
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supply of California  
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Subscribe for SUNSET,  
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## The Fresno Scraper.

3 1/2-4-5 Foot.



FRESNO AGRICULTURAL WORKS.  
FRESNO, CALIFORNIA.

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We attend to all business connected with U. S. and Foreign Patents, Caveats, Designs, Trade-Marks, Copyrights and Labels; prepare Assignments, Licenses and Agreements, and furnish opinions as to Patentability, Infringement, etc. DEWEY, STRONG & CO. (Established 1860), 330 Market St., S. F., Cal., and 918 F St., Washington, D. C.



## The White Slave.

Written for the PACIFIC RURAL PRESS by ELIZA.

He came from Nebraska to this State about nine years ago—that is to say, long after slavery was abolished, and yet \* \* \* but we shall come to that afterwards.

He was a young man of thirty, and his young wife came with him. Money he had very little; but no one could see that short and solid-built frame, with the muscles of steel, that clear eye and square jaw, and not recognize at once the man of grim determination to succeed, with the true vigor and strength of the pioneer who laughs at bodily fatigue. He was a farmer, and when looking about for a suitable place had the good fortune to enter the real estate office of the millionaire landowner, who cares not for ready cash, but is satisfied if he can make a reasonable interest on his investments. So there a suitable piece of land, with a little house on it, was selected and he began to make himself a home in one of the most picturesque spots of our world-famed Golden State. To be sure, the land was somewhat rough, the country pretty wild, the road only a trail, but what of that? The beauty of the landscape, the clearness of the atmosphere, the glorious sunshine, the magnificent woods, with every dewdrop a diamond scintillating in the morning air, were stimulating enough to become almost an elixir of life. And then on what easy terms would the fifty acres be bought and eventually become his property!

Surely \$80 per acre seemed a big price, especially if one began to consider that the millionaire land owner paid less than \$5 for it, and \$4000 is a large sum; but, you see, no money down! not a dollar—not one cent!

Of course, he did not get a deed; but there was his contract, giving him eight, or ten or twelve years to pay for his home. And, in the meantime, if he wanted some lumber for house, barn or fencing, or, perhaps, another horse for his work, he could get that without pay. It was simply all entered in the book and interest charged. Pay for it he could easily later, when the farm was cleared and fenced, the fields brought into cultivation, the orchard planted and come into bearing. This would be when his trees were five years old. Enough at first to pay for pruning and cultivation. One year later they could probably bring a box of apples each, which, when sold at the low price of 50 cents, would be, from eighty trees, some \$40 per acre. Think of it! Half the price of the land back, after six years, in one year's crop! And two or three years later every crop would equal the price of the land. In the meantime the soil between the trees could be used to raise all kinds of products to eat or sell, and so would support them nicely with only a little careful farming and good, steady work.

He was ready for both. Young and strong, and with a good wife to help him. That was nine years ago, and yesterday \* \* \* but we shall come to that afterwards. The work proved harder and the returns smaller than he anticipated. The first year or two it was even impossible to pay the interest. But that was nothing, as it was simply charged with the rest; and since, in the course of time, the family of two became one of five, the home was, in his eyes, made more valuable than ever. So, on he worked, longer hours per day than any other, and did more work per hour than did most men. And whether the millionaire land owner stayed at home, or went to San Francisco and stopped at the Palace Hotel, or made a trip to Europe, his white slave was working at the daily task of earning interest due on the ever-growing capital. To repay any of that gradually became a remote possibility only, for the first fruit crops paid no more than only a part of the interest, long overdue. No human being could stand that strain. The house, old when he bought it, was never repaired and became a hovel. The wife and children were half clad, and in his last endeavors to win in the pace that kills, he tried to save money by going hungry. Yesterday morning

he got up early, went out of the house and, bending his forehead down towards the barrel of his rifle, put a bullet through his brain.

The result of nine years of hard daily labor by a man who neither smoked nor drank! That in the course of those years he became a Socialist and died with the convictions of an Anarchist, who shall wonder at it or blame him? But is there not something rotten in the State of Denmark when such a thing can come to pass? The place he lived on is certainly worth \$2000 more now than when he bought it; but not one foot of the land, nor a nickel of this extra value, belonged to him. He was heavier in debt now than nine years ago and his wife remains behind utterly penniless. To earn her living, if alone in the world, would be easy for her; but there are three little bodies to feed and clothe, three little minds to educate. She can never do it without assistance, and, since every word of this sad story is true, I trust that many readers of it throughout the State will help us to give the black cloud which drove the desperate husband to his doom a good, wide silver lining.

The PACIFIC RURAL PRESS has consented to receive all money sent for this purpose, and a well known bank cashier in one of our country towns will see to it that it reaches its destination in such a form and manner as he will judge best.

## How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRAU, Wholesale Druggists, Toledo, O. WALKING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free. Hall's Family Pills are the best.

CAMBRIDGE, MASS., June 11, 1901.

DR. S. A. TUTTLE—Dear Sir: Kindly send me the book on "Veterinary Experience" which you advertise to send free. I have used the Elixir for several years, and find it does all you say. Yours respectfully,

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## New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING NOVEMBER 5, 1901.

685,900.—PACKAGE FOR DRIED FRUIT—W. C. Anderson, San Jose, Cal.  
685,902.—TREATMENT OF MINERAL OILS—A. F. L. Bell, Los Angeles, Cal.  
685,904.—MILKING APPARATUS—B. Berg, S. F.  
685,967.—WATER MOTOR—L. E. Boqvist, Seattle, Wash.  
685,970.—TRUNK LASHING—C. L. Candler, Seattle, Wash.  
685,818.—PIPE COUPLING—R. M. Close, Los Angeles, Cal.  
685,828.—LENSES—C. B. Elliott, Los Angeles, Cal.  
686,217.—CAR TRUCK—E. W. Fairbanks, Los Angeles, Cal.  
686,044.—BICYCLE HOLDER—E. W. Flint, Pasadena, Cal.  
686,218.—ELECTRIC LAMP—M. E. H. Forst, S. F.  
685,915.—SELF-LOCKING HOOK—F. G. Gaschlin, S. F.  
686,762.—TANK BAND—J. Hattely, Seattle, Wash.  
686,224.—BOTTLE—W. Hill, Los Angeles, Cal.  
685,819.—VENTILATOR CAP—J. Keene, S. F.  
685,850.—BICYCLE DRIVER—F. A. Kelley, Susanville, Cal.  
686,231.—AMALGAMATOR—G. W. Lee, S. F.  
686,106.—FILE HANDLE—T. W. Miller, Phoenix, Ariz.  
685,868.—PLASTER BITE PLATE—J. L. Reavis, La-grande, Or.  
685,882.—MOP WRINGER—R. E. H. Thibault, Stockton, Cal.  
686,174.—DISK HARROW—W. Wildman, Spadra, Cal.  
35,265.—DESIGN—R. S. McIntyre, Riverside, Cal.  
35,270.—DESIGN—N. C. Whitney, Riverside, Cal.



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—AND OTHER—

## SEPARATOR AWARDS.

All sorts of lying and unscrupulous misrepresentation by our disgruntled would-be competitors to the contrary, the following conclusive facts remain true and indisputable.

(1) The De Laval machines were alone chosen and used in the work of the Model Dairy at the Chicago Exposition and achieved their usual complete success.

(2) The De Laval machines received the only award made to Cream Separators by the regular jury of awards at the Chicago Exposition, this jury consisting of some fifteen of the most prominent creamerymen, dairy-men and mechanical experts in the United States and Canada.

(3) At the Paris Exposition the De Laval machines received the Grand Prize or highest award, over all competitors from every country, being entered and receiving such award in the name of "Societe Anonyme Separator" which is the French translation of "Separator Corporate Company," the name of the De Laval European organization.

(4) At the Pan-American Exposition the De Laval machines received the Gold Medal or highest award, and the only one of its kind given to Cream Separators alone.

(5) In the Model Dairy at the Buffalo Exposition, the practical work of the De Laval machines easily out-classed that of the only competitor which had the audacity to attempt comparison, as has been set forth in the published statement of the Model Dairy authorities.

These triumphs of the De Laval machines were but natural and logical, being only in keeping with their recognized supremacy in dairying practice in every country, and but illustrations of the nearly 600 First Prizes awarded the De Laval machines during the past twenty years, including every representative exhibition throughout the world.

Anyone further interested in any of these awards, some of which have been the subject of recent advertising controversy, may ascertain the full details by simply asking for them.

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**THOMAS' PHOSPHATE POWDER** supplying Phosphoric Acid,  
**MURIATE and SULPHATE OF POTASH** supplying Potash,

THE THREE ESSENTIAL ELEMENTS OF PLANT FOOD.

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WRITE TO THEM FOR PAMPHLETS.

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GRAND PRIX GOLD MEDAL PARIS EXPOSITION 1900.

Grown on J. West Martin Ranch, Livermore, Cal.

IT is clean and of uniform grain. Has increased in gluten every planting in California. All small, light and immature end grains removed. Has been milled by Del Monte Milling Co., to whom we respectfully refer.

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## Large Stock of Tanks on Hand.

Oil Tanks. Water Tanks. Wine Tanks.

Lumber direct from the woods. THIS MEANS LOW PRICES.



5000 ft. of Pipe, good as new, at a bargain.

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APPLES, PEARS, PEACHES,  
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SUGAR PRUNES on Plum Root.  
MY STOCK IS EXTRA FINE.

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Vigorous Grower. Large. Fine  
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WILL LAST A LIFE TIME. PRICE, \$1.25 EACH; THREE FOR \$3.25.  
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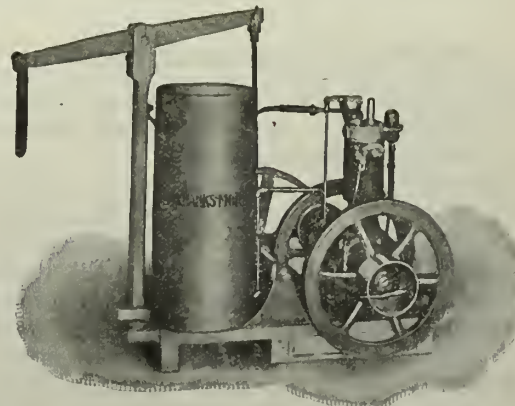
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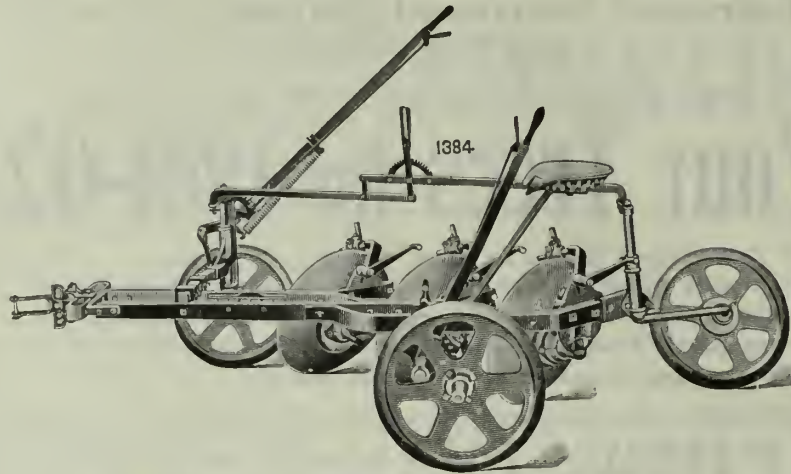




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— FOR —  
Ease of Operation  
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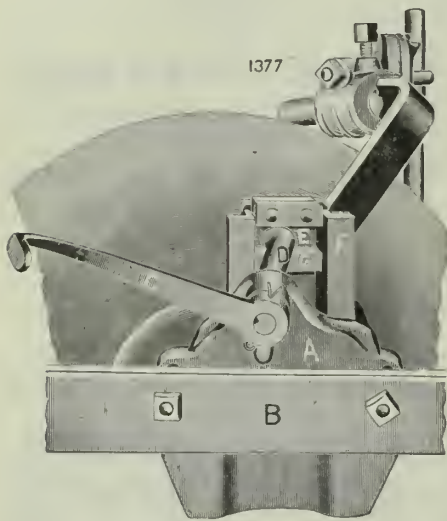
MADE AS A

Single Disc.

Double Disc.

Triple Disc.

Quadruple Disc.



THIS CUT shows the patented raising device used on all DEERE DISC PLOWS and no others. Discs can be raised six inches from the ground.

## ALL DEERE DISC PLOWS

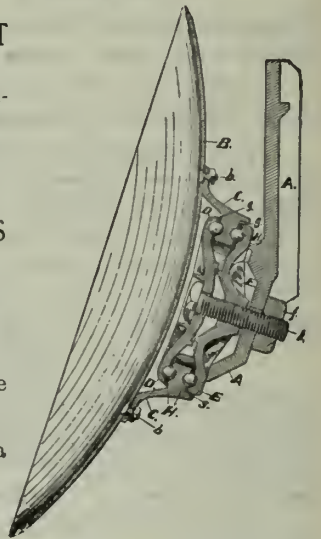
HAVE A PATENTED STEERING DEVICE BY MEANS OF WHICH THE LANDING OF THE PLOW IS UNDER COMPLETE CONTROL OF THE OPERATOR AT ALL TIMES.

## BUY A DEERE

AND DO YOUR WORK  
Quickly, & Successfully  
and Economically.

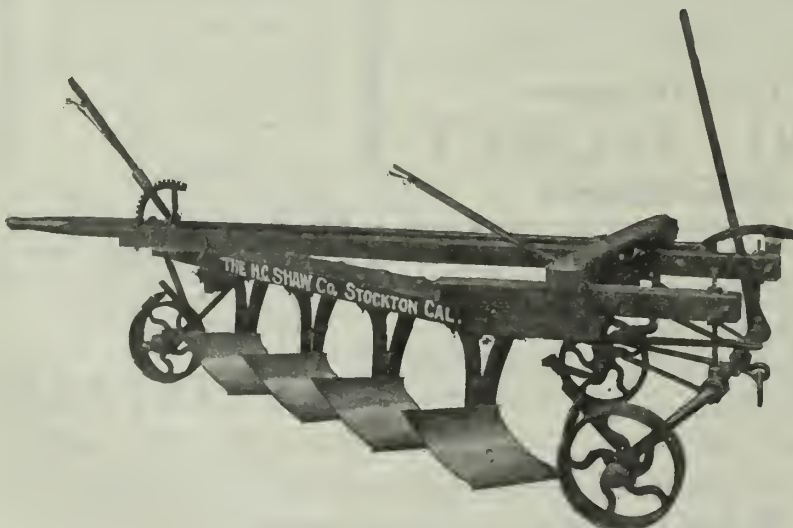
THIS CUT shows the patented ball-bearing disc used on all DEERE DISC PLOWS and no others.

NOTE THIS DIFFERENCE: Bearings on our plows are nine inches apart; other makes have a single bolt through the center.



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## SHAW'S IMPROVED Reversible Gang Plow.



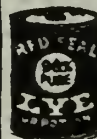
### FEATURES AND ADVANTAGES OF THESE PLOWS ARE:

- OUR PATENT FRONT CRANK AXLE AND DRAFT BAR prevents clogging with trash between front plow and furrow wheel, as the clearance space is much greater.
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PATENTED AND MANUFACTURED BY

THE H. C. SHAW CO., Stockton, Cal.

## DIRECTIONS FOR SUCCESSFUL OLIVE PICKLING



PLACE olives in solution composed, 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove tartness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 6 oz. salt to gallon water for 7 days. Put in brine 10 oz. salt to gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles scalded in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

YOU MUST USE  
**RED-SEAL-LYE**

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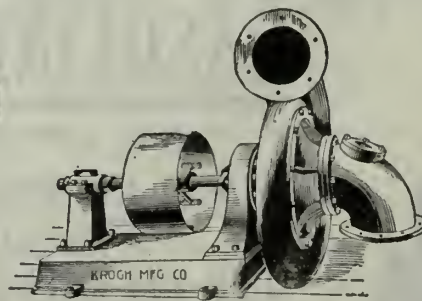
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Capacity up to 100,000 gallons per minute.

They are made Horizontal and Vertical and Direct Connected to Steam or Electric Power. Our Pumps have given the highest efficiencies ever recorded.

IN USE ALL OVER THE PACIFIC STATES.

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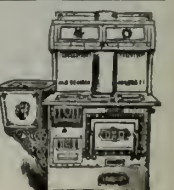
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\$50.00 RANGE FOR \$25.00

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WILLARD STEEL RANGE into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/4 inches deep, and 16-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Dept. 8. Will ship C. O. D. with privilege of examination.





# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 22.

SAN FRANCISCO. SATURDAY. NOVEMBER 30, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### The Ancient Scuppernong.

Written for the PACIFIC RURAL PRESS by  
A. D. DART.

The first expedition sent out from England by Sir Walter Raleigh in 1584 consisted of two small barks under command of Captains Amadas and Barlow. The vessels entered Pamlico Sound at New Inlet, which is about 40 miles north of Hatteras Inlet, on the North Carolina coast. After entering the sound, they proceeded on their way in a northerly direction, arriving off Roanoke Island in July of the same year.

Subsequently, in his report of the voyage to Sir Walter Raleigh, Captain Amadas makes the following reference to the native Scuppernong grape, which he found growing so abundantly on the island and on the mainland:

"Which being performed (i. e., possession taken) according the ceremonies used in such enterprises, we viewed the land about us, being where we first landed very sandy and low toward the water side, but so full of grapes as the very beating and surge of the sea overflowed them, of which we found such plenty, as well there as in all places else, both on the sand, and on the green soil, on the hills as on the plains, as well on every little shrub, as also climbing towards the tops of high cedars, that I think in all the world the like abundance is not to be found, and myself having seen those parts of Europe that most abound, find such difference as were incredible to be written."

One familiar with North Carolina will not be surprised at this abundance of grapes. The State might unquestionably be made the greatest vine growing country on the eastern side of the continent. The three finest native grapes of our country all spread from North Carolina—these are the Scuppernong, the Catawba and the Isabella. Tradition says that the Scuppernong vine shown in the photograph was planted by these early colonists; it is still hearty and vigorous, covering over an acre of ground and yielding annually about a ton of grapes, most of which is made into wine.

The vine is now on the farm of B. F. Meekins, who told the writer that his grandfather purchased the farm in 1797, and at that time the vine appeared about as it does to-day, as to size and area covered. The banks of the Catawba river furnish the grape known by that name. It is extensively cultivated in Ohio as a wine grape. The Isabella is supposed to be a hybrid between the native fox grape and the Burgundy introduced into South Carolina by the Huguenots. The first authentic account we have of this grape is that it was found in Dorchester, S. C.; from there a Governor Smith of North Carolina obtained cuttings which he planted near Wilmington, N. C., and from this stock a Mrs. Isabella Gibbs took cuttings which she planted on

Long Island, N. Y. It was called the Isabella in compliment to Mrs. Gibbs, who introduced it at the North. This vine stands the northern climate better than any other.

The foregoing comments by Mr. Dart upon the Scuppernong and the other grapes he mentions are only indirectly interesting in California—that is, our

be grown here, and all our commercial ventures in the grape line are founded upon the peerless qualities and special adaptations of the vinifera varieties. It is interesting, also, that all the early efforts to acclimate the vinifera in the home of the Scuppernong have failed, although they occupied the attention of horticulturists all through the last century. At the present time still

as to which shall pay more for the varmints. Round Hill and Canright districts have decided to offer a greater bounty than their neighbors of the Montezuma hills recently offered. They will pay \$50 per scalp for all coyotes killed within certain fixed territory. This is the largest coyote bounty ever offered in the State and is made because of great depredations among the flocks.

### Colonizing Young Englishmen.

In view of the checkered experience of young Englishmen colonized in California during the last decade, a telegram giving news from Wichita, Kan., is interesting. It seems that the Kansas agent for the Colonial and United States Mortgage Co. of England is making arrangements to bring to Kansas many of the younger sons of wealthy parents, also those of poor nobility, who are to be apprenticed out to farmers and taught how to raise wheat and corn. It is the intention of the mortgage company to locate these men on land owned by their parents, purchased during the boom of years ago. About forty young Englishmen are now en route. Their parents think it is not only a good scheme to get their idle sons to work, but will enable them to get money out of vast acres which have heretofore been lying idle.

We sincerely hope that this does not mean that another lot of young Englishmen is to be handled as other lots have been in past years. The parent has been imposed upon by exaggerated statements of all kinds and the boys have been often stranded after having undergone various hardships. It is perhaps a singular fact that the worst things ever done to young Englishmen were perpetrated by English adventurers. Americans are sometimes not slow at confidence games, but the most cruel, most conscienceless operations we have ever heard of have been practiced by Englishmen upon their own young countrymen. They have been fleeced and flayed in a way which makes American sharpness seem dull. We hope the Kansas proposition is not of this character, but it has some of the earmarks.

SOUTHERN CALIFORNIA people have during the last decade done much for the development of the central and northern parts of the State by purchase and improvement of lands. The latest and largest operation in this line is by a party of Los Angeles capitalists, who are said to have bought 6300 acres of reclaimed land, 7 miles from Stockton, from the California & Nevada Dredging Co. The land is on the line of the Santa Fe Railway, and the purchase price is said to be a quarter of a million dollars. The land will be improved and used to raise vegetables. A canning plant will be erected on the place and asparagus will be grown and canned for the Eastern market.



A Great Scuppernong Grape Vine in North Carolina.

conditions favor other varieties. It is, of course, interesting in a land of large grape vines like California to see such a majestic stem as that of the Scuppernong, and to know that its canes cover more than an acre; but it ought to be stated for the advantage of the newer Californians that, though the Scuppernong has been repeatedly brought to California for trial, it has never shown any liking for our conditions. Nor is the Scuppernong of much commercial account anywhere. Its bearing habit and the character of the fruit give it inferior standing. So with Eastern varieties which are better than the Scuppernong; only small quantities can

another effort is being made to successfully establish the vinifera in North Carolina under the direction of Baron von Herff, and the earlier indications were somewhat promising. We shall probably hear ere long of the farther fortune of the undertaking. Meanwhile California must extend her greeting to North Carolina as certainly a land of great grape vines on the basis of the evidence which our engraving and the accompanying comments afford.

If these bounties continue to rise, we shall have plenty of people breeding coyotes. There seems to be a rivalry between two localities in Solano county



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E. J. WICKSON.....Horticultural Editor.

San Francisco, November 30, 1901.

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## The Week.

Thanksgiving is affecting all things this week. We go to press a day ahead to clear the track for the adoration of the thankful printer, and we find that most other things are taking an unusual gait. Regular long distance trading is dulled and nearby commerce, especially in delicacies for the palate, is notably sharpened. The old dogs of business are growling over a broken week and the pups are barking with joy in anticipation of the way they are going to fill it up. There are all signs that thanksgiving will be very enthusiastically observed this year all through the mainland of the United States and from many islands the savor of the sacrifice of the great American bird will rise to unaccustomed skies. Just at this time, if at no other, the American eagle becomes a turkey, while the turkey himself wishes he was an eagle. But whatever may be the bird, the spirit of the occasion is unusually bright and brisk this year. The occasions for thanksgiving are manifold and the observance of the day, along both public and private lines, will be full of delight and enthusiasm.

Wheat is off again this week as a sort of reaction from last week's activity. The bears have collected themselves and have found that there is another grain or two in the visible supply, that there is less shipping, and that charters have advanced a shade; so, of course, there is a weak feeling in futures and spot is unchanged but slow. Two cargoes only have gone out, but six ships have gone on the "engaged" list at better rates. Barley is about the same as last week—quiet—and only one shipload started. Oats are steady all around, except that red oats for seed are in better request. There are light receipts from the north, as the Government is taking oats to the Orient from the Sound ports. Corn is all prices, as there is still too little dry and too much wet corn in sight. Beans are quiet and no special change, except an easier feeling in Large Whites and Pinks—the former having been rather overdone in recent trading. Lima beans are steady. Bran is weak, as are other mill feeds, except that ground barley and corn are firmly held. Hay is easier, especially medium grades and alfalfa; the coming on of green feeds seems to dull the hay market. Beef and mutton are steady; hogs are the same as last week, coming in freely, but as freely taken, which gives a good outlook. Butter is lower and slow at the decline. Cheese is still firm and in light stock. Eggs are very high for choice fresh and various for all other grades, which are abundant; Eastern stored eggs are arriving freely as fresh, under the 90-day definition of a fresh egg. Poultry is all right as we write, on Tuesday. Turkeys are in good demand and selling well. The receipts are not excessive so far. Potatoes are holding without change, speculators taking them as de-

sired. Onions are also in good shape. Choice apples are high and strong, but poor are neglected. Fancy pears are scarce. Grapes are nearly out, though all in good condition are selling well. Oranges are weak—too green to suit. Lemons are slow at old prices and limes are low. Dried fruit is jobbing moderately. Little except prunes are offering at first hands. Buyers are bidding 2½c for prunes outside of Santa Clara, and Eastern buyers think they ought to have Santa Claras at that figure. Almonds and walnuts are clearing out fairly. Honey is doing little here. Hops are slow; though 10½@11c are talked about in a small way, not much is doing from first hands. Wool is quiet and scourers well supplied for a long campaign.

The statement that the original home of the San Jose scale was found in Japan has been supplemented by the announcement by the Division of Entomology at Washington that it has also been found at home in North China. Particular interest pertains to this last statement, because it is also stated that the scale is there held in check by a ladybug which prevents it from becoming destructive. In North China the scale was found in a section where there have been no fruit importations, and all fruits are of native sorts. Further, in this district it was found to have a natural enemy—a ladybug beetle—of which Dr. Marlatt, the expert who made the discovery, has collected many specimens and forwarded them to Washington, and steps will be taken to acclimate this important species. This importation will doubtless prove of great value to fruit growers in this country. The San Jose scale is now a much greater affair in the Eastern and Southern States than it is in California, but it will be well even for us to have a ladybug with a keen appetite for it. The distribution will be made by Dr. L. O. Howard, head of the division at Washington, as soon as the supplies are bred up to the distribution point.

Speaking of insects, it is important to note that the fruit dealers and growers in the Newcastle region have completed the arrangements with the State University to have a special entomologist sent to them for a half year's study of the peach moth. We hinted at such a proposition last week and it is now completed, for the Newcastle people agree to provide for and maintain the entomologist during the term of his local studies, the University meeting his salary. This shows a co-operative spirit which will result in the Newcastle region being brought up to date in knowledge about this very injurious insect, and in all probability being enabled to protect their fruit from its ravages. Mr. W. T. Clark, an advanced student at the University, will probably be detailed for this work. He has shown his fitness for it by most satisfactory studies of the potato moth, of which we hope soon to give fuller information. To our notion these local studies of particular insect in places where they are doing injury are exceedingly important just at this time, when we have learned so much about effective insecticides and still need to know so much about particular life histories and habits of the pests.

The orange growers are getting wide awake as to the necessity of doing something effective in the way of showing the law makers at Washington how dangerous are the pending reciprocity treaties with tropical regions who are to take Eastern manufactured products free of duty and send sugar and fruits into our country with the same freedom. This would be the destruction of several American fruit interests. The Riverside orange growers are on the point of taxing themselves one-fifth of one cent per box on the fruit it may market during the season of 1901-2, that the funds, or such part as may be necessary, may be for the use of the California Citrus Tariff Committee. This committee will be maintained in the city of Washington during the coming session of Congress to work in opposition to the ratification of the reciprocity treaties now pending in the Senate. Probably other orange districts will follow the example of Riverside, and Congress will learn the inwardness of these treaties which are proposed to push some products of the country at the cost of destroying others. This scheme is unfair and only needs to be well known to be abandoned.

This news suggests a reference to the outlook for citrus fruits at the East this winter. A. H. Naftzger, president of the Southern California Fruit Exchange, who has recently returned from the East, was seen by a representative of the Riverside Press. Asked about the outlook on prices for oranges in the East, Mr. Naftzger said: "I anticipate a season of fair, though not extravagant prices. The shortage of the apple crop in the East and the fact that the orange crop will be less than last year will tend to give the market an upward tendency; but so far as the holiday trade is concerned, at least, we cannot expect high prices. There is too much Florida, Jamaica and Mexican fruit on the market to make high prices possible." On the whole, however, Mr. Naftzger thinks the outlook is favorable for a good year for the orange growers of California. He found the East very prosperous, and the people of all classes will have money to spend this year on oranges and other luxuries.

Some energetic work in reforestation at the south is in progress. The Forest and Water Association of Los Angeles county, in co-operation with the federal Bureau of Forestry, have gathered pine seed to be planted on the bare spots caused by drouth and fires in the Sierra Madre mountains. The pine selected (*pinus tuberculata*) is indigenous to southern California. Experiments have shown that it grows readily on hot, steep slopes from sea level to 5000 feet elevation. It will be of value to the whole State if this plan of scattering seed on deforested areas shall result in a good growth of seedlings. A good wet winter at the south will have much to do with such success, and for this as well as other regions we hope it will be wet indeed.

In southern California we are also to have a retrieval of the old proposition of steam plowing with English machinery. About twenty-five years ago the first outfit for such work was brought into this State, and it was found to be too cumbersome and expensive in operation for the San Joaquin region, where it was taken. The new trial is to be made on the sugar beet lands near Oxnard, in Ventura county, and the Courier of that place gives an account of it. It consists of two tremendous traction engines with two large double-end gang plows. The plows are expected to throw up the land on from fifteen to twenty acres per day. They are drawn across the field by a cable, one end consisting of five shares, turning over the soil, and then drawn straight back, with the other end turning the soil. The outfit was shipped from Leeds, England, and cost \$25,000. Each of the engines weighs fifteen tons and is of 16 H. P. Each carries 450 yards of cable, one being saturated on one side of the field and the second on the other. The plow now in operation has three shares on each end and is for deep plowing, and at present is turning up the soil to the depth of 16 inches; the other plow has five shares on each end, and with the same power will turn up the soil to the depth of 12 inches. We hope the enterprise will be in every way successful, but we still think better work could be done under California conditions by the California type of traction engine working straight away and not by pulling crossways from headlands. However, we shall see how the affair will work out. We should be sad to see this outfit rusting under a shed as its predecessor of twenty-five years ago was destined to do.

One of the Horticultural Commissioners of San Joaquin county states that W. F. Jordan, who has a vineyard of nine acres east of Stockton, has sold \$2500 worth of grapes off that land. All his grapes were sold to the winery; the variety is known as the West Prolific. No doubt this will stimulate vine planting in the Stockton district.

## Contributions Acknowledged.

The PACIFIC RURAL PRESS desires to acknowledge the receipt of the following contributions to the relief of the widow whose situation was so pathetically described in the article "The White Slave" on page 334 of last week's issue:

A. Block, Santa Clara.....\$10  
Cash, Menlo Park..... 2



QUERIES AND REPLIES.

Peach Moth.

TO THE EDITOR:—I would like information touching upon the peach moth, and whether the application of the distillate or kerosene emulsions will kill the larvæ of this moth in the winter season, and also if its application is injurious to deciduous trees?—READER, Newcastle.

Application of distillate or kerosene emulsions will kill the larvæ of the peach moth at this time of the year and later, so long as this worm remains hidden in the rough bark in the crotches of the tree and the forkings of the branches higher up. If you have any occasion to spray your peach trees for San Jose scale it would be advisable to use the lime, salt and sulphur wash, because that will kill both the scale and the moth larvæ. If, however, it is simply a question of the peach moth, the emulsions are cheapest for that purpose. This winter treatment will save the twigs in the spring time and will, perhaps, save the early peaches; but, as other moths are likely to fly into the orchard from other trees which are not given a winter treatment, your later peaches will still be liable to infestation. Just what summer treatment for the moth is best is not yet determined. Probably Paris green, one pound to 300 gallons of water, will succeed. The Agricultural Department of the University hopes to make a local study of the matter in your region this coming year, if proper arrangements can be made for it. The thing to do now, unquestionably, is to kill the worms which are hibernating on your own trees by winter spraying.

Walnuts in Sacramento County.

TO THE EDITOR:—I desire to plant the best soft-shell English walnuts in my orchard at Fair Oaks, where the soil is a sandy loam, in which the Navel orange, pomelo and lemon trees grow thriftily. Is it better to plant the black walnut and later graft it to the soft-shell English walnut, or to plant the soft-shell Santa Barbara walnut? I should also like to know the best method of planting such trees and the right time of year. As the English walnut is a beautiful shade tree, as well as fruitful under right conditions, I should like to adorn my orange grove with a row of the best variety to shade the sidewalk in summer. A friend has made a similar inquiry about planting the Santa Barbara soft-shell walnut trees in Orangevale.—EDWARD I. GALVIN, Sacramento.

The best varieties of English walnuts for central California are the French varieties, like the Proëpar-turiens, Chaberte, Franquette, Parisienne and May-ette. These can all be had from the nurserymen, grafted on the California black walnut root. To get uniformity in style of avenue tree, it would be desirable to select one of the varieties; otherwise the trees will vary in size and appearance to some extent. You can plant the California black walnut and graft afterwards with one of these varieties, but wal-nut grafting is not easy, although with due care very successful results can be attained. We believe it would be, on the whole, better to secure trees already growing on the California root. The varieties grown near the coast in southern California are not usually successful in the more trying conditions of summer heat and winter frost which are encountered in the interior valley regions. Walnut trees are planted during the winter at whatever time seems best in your locality for other deciduous fruit trees.

Australian Rye Grass.

TO THE EDITOR:—I saw in your paper of Nov. 9th a piece about Australian rye grass, also about Italian rye grass. Can you tell me where I can get the seed, what will it cost and how much seed will it take to an acre? Is there any difference between the two kinds? Does it make good hay and does it drown out if water stands on it? Can it be easily killed out by cultivation? When should it be sown—in fall or spring? I have a piece of land very badly affected by seepage water, which sometimes stands on portions of it. It is sediment land and very rich, but too wet for alfalfa.—SUBSCRIBER, Meridian.

Australian and Italian rye grasses are both well suited to the conditions which you describe. The Australian variety has been most largely used in California, and is perhaps best for your purpose. It will make fair hay if not allowed to stand too long be-fore cutting. It will endure overflow, and the land can be broken up and the grass killed out easily be-cause it does not make a running root. The seed should be sown in the fall usually; although if you ex-pect winter overflow before the grass can get a good

start, it will be best to sow as soon as possible after the water recedes. The land which you describe is suited to give you a very heavy growth, which can be probably cut two or three times if moisture enough remains in the soil. A good stand can be had by sowing from thirty to forty pounds of seed to the acre, and the seed can be bought from seedsmen advertising in the PACIFIC RURAL PRESS.

Better Fill Up With New Trees.

TO THE EDITOR:—Having read your answer in last week's paper concerning the budding of almond trees, I wish to ask about budding or grafting young peach trees. Last spring I planted dormant buds, but only about half of them are now growing. Some of the seedling trees now growing are very good and some are not. Would it be worth while to graft them, and at what time? Should the graft be put in the old stock of the tree near the ground or is it better to graft on the branches? I take it that your answer concerning the almond trees applies also to peach trees. Is it better to bud them on the branches? In your columns I see many questions asked that I am interested in.—SUBSCRIBER, Del Rey, Fresno county, Cal.

In this case we should not hesitate a moment to pull out the trees which failed to make growth on the bud and put in good yearling trees. The case is different from the almond proposition, because in that case there was a root from an almond planted in place which the grower was very anxious to have for the foundation of the new tree. In your case no such consideration prevails, for you have no seedling root grown in place, but a transplanted root. We do not agree with the views which hold that it is so desirable to have the root grown in place, though in such a trying situation as the edge of the Mojave it may be important. Therefore we advise you not to waste time in either budding or grafting this spring, but put in new yearlings and get a more uniform and shapely growth. As for budding and grafting, the former is much better for the peach, which requires extra care in grafting and makes many misses. Budding can be done in the growth made this year, if it is done aright.

Winter Treatment for Vine Mildew.

TO THE EDITOR:—Will you inform me if there is a wash spray that can be used after pruning grape vines to prevent mildew the following year? If there is, I wish you would advise me of it and where to get it. I have been using sulphur, but it takes so much that it burns the vine and grapes, and then cannot keep away the mildew.—READER, Cloverdale.

The winter form of Bordeaux mixture will largely destroy mildew spores which may be resting on the bark of the vine stump. This preparation, which is useful also in the winter for curl leaf of the peach or scab of the apple and pear, is made in this way: Dis-solve five pounds of bluestone in ten gallons of water in a barrel; in another wooden vessel slake five pounds of lime to thin whitewash; pour this white-wash slowly through a sieve into the bluestone solu-tion, stir thoroughly and add water enough to make forty-five gallons in all. This can be sprayed on the vine stump or applied with a whitewash brush. Winter treatment will in most cases prevent the very early appearance of mildew, but the vines must be watched and sulphur promptly used as soon as the first sign of mildew is seen. Mildew spores travel in the air and for this reason no winter treat-ment can ensure summer freedom.

Olive Lye as a Spray.

TO THE EDITOR:—Can you give me any information about the effect of lye upon trees, say, used with salt and sulphur spray in place of lime? My object in asking this question is that I am constantly throwing out lye which has been used for olives, and the thought came to me that it ought to be of some value to be used as above stated.—M. GODLEY, Hillcrest.

The lye used in olive pickling is too weak to be of much value as an insecticide. It would not replace the lime in the lime, salt and sulphur, for the efficacy of that wash consists in making a sulphide of lime by definite quantities of lime and sulphur and long boil-ing. If the alkaline water were used instead of com-mon water in the preparation of the lime, salt and sulphur wash it might make it take a little better bite at the scale, but it is too weak to amount to much either way. If about two ounces of lye addi-tional to each gallon of the waste dip were added it would make a good wash to kill moss and clean the tree bark, but it would not trouble the scale much.

Winter Grafting.

TO THE EDITOR:—Kindly inform me about grafting trees in the latter part of December. Do you believe there is ordinarily enough life in the tree to keep the graft alive?—M. G., Placer county.

Top grafting in old orchard of trees which are easy to graft, like pears and apples, is done all win-ter from December onward in the coast regions. With good waxing, there seems no danger in this practice, and where much grafting is done it is neces-sary to begin early and keep at it. We believe that under ordinary California winter conditions it is good practice, though in places liable to winter heat and drouth the grafting should be done nearer to the time of the starting of the growth, so that exposure may be of shorter duration.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending November 25, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

The weather during the week has been favorable for farm work. The temperature has been somewhat above the normal and light rain has fallen in nearly all sections. Plowing and seeding continue. Wheat is making splen-did growth and looks strong and healthy. Summer-fallowing is nearly completed in some places and farmers are preparing for winter sowing. Grass is growing rap-idly and green feed is unusually abundant. Stock are in good condition. Orchard work is progressing. Oranges and olives are being gathered. The bean crop has been harvested.

COAST AND BAY SECTIONS.

Warm weather has prevailed during the week, favor-able for farm work and growing crops. Rain has fallen from San Francisco northward, amounting to over 2 inches in Napa and Sonoma counties, and heavy fogs have prevailed along the coast. Rain is needed in the southern coast counties, where the soil in some places is too dry for plowing. Some cultivating is being done in these places, and in other sections plowing and seeding are progressing rapidly. If the season continues favor-able a large acreage of wheat will be sown. Green feed is in excellent condition. Some orchardists in Napa county are wrapping prune trees with paper saturated with "bug exterminator," hoping to prevent the ravages of the canker worm.

SAN JOAQUIN VALLEY.

Heavy fogs have prevailed in most sections during the nights and mornings, clearing away about 10 o'clock. Light rain has fallen from Fresno northward, in some places having been sufficient to benefit early grain and pasturage. Light frosts have occurred in some sections. Early sown grain is growing rapidly and looks well. The wheat acreage will be materially increased in por-tions of Tulare county. Plowing and seeding are in progress except on the very dry lands. Green feed is plentiful and stock are in good condition. Orchards and vineyards are looking well. Orange picking and ship-pling continue.

SOUTHERN CALIFORNIA.

The temperature has been nearly normal during the week and no rain has fallen. Fogs have prevailed along the coast. The bean crop is practically all harvested; there have been some losses through rain and fogs, but not so great as anticipated. Plowing and seeding are progressing in nearly all sections; a large acreage is be-ing sown to barley in the vicinity of Anaheim, and there will be about the usual acreage of wheat if conditions continue favorable. Early sown grain and pasturage are in good condition, but will need rain soon. Oranges are ripening rapidly; there will be a good crop. A few late raisins are on the trays in San Diego county.

LOS ANGELES SUMMARY.—Warm, fine growing week. Plowing and seeding progressing actively. Beans are nearly all thrashed and are turning out better than was expected. Hills and valleys are covered with green feed.

EUREKA SUMMARY.—Plowing and seeding continue. Some grain is up and making good progress. Pasturage is excellent. Farmers are shipping apples and potatoes.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Tuesday, November 26, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rain-fall to Date.....	Total Seasonal Rain-fall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Tempera-ture for the Week...	Minimum Tempera-ture for the Week...
Eureka.....	1.26	10.03	15.07	9.20	62	44
Red Bluff.....	.70	5.84	6.64	4.63	64	44
Sacramento.....	.55	3.99	6.30	3.34	64	50
San Francisco.....	1.68	4.35	5.85	3.35	62	52
Fresno.....	.00	1.69	5.10	4.31	72	44
Independence.....	.00	1.09	2.18	1.22	66	34
San Luis Obispo.....	.00	3.94	9.94	3.01	76	46
Los Angeles.....	.00	2.44	6.79	2.03	82	44
San Diego.....	.00	.75	1.73	1.14	78	50
Yuma.....	.00	.22	.02	1.22	82	42



## HORTICULTURE.

### Work of an Effective Horticultural Commissioner.

Now that the wider spreading of destructive insects is constantly being noted and several of the worst of them are cropping out in new regions of the State, it is strange that some counties are content to let their fruit interests go unprotected or content with inferior service in this line. We have some strikingly energetic and efficient men and should have more of them. Perhaps we can minister to this end by citing a few things accomplished in a county which we consider exceptionally well officered. Such is Santa Cruz county. At a recent meeting of the Pajaro Valley Orchardists' Association Commissioner C. H. Rodgers submitted an annual report, from which we shall take parts, showing the breadth and directness of the work. There may be found many suggestions in it for work in other counties.

**THE BEGINNING.**—In 1899 a number of our orchardists, becoming alarmed at the rapid increase of insect pests which threatened the destruction of our leading industry, petitioned our Supervisors to appoint a Board of Horticultural Commissioners. Pursuant to this petition, and in accordance with law, the Supervisors appointed three commissioners. The commission effected an organization in December of that year.

At this meeting, after discussing existing conditions, it was decided to proceed in a conservative way; to institute an educational campaign; to use argument and persuasion; to place in the hands of the orchardists available literature bearing on the eradication of pests. It was decided not to use coercion or enforcement of the law, except as a last resort—when all other means had failed.

**PUBLICATION.**—One of the first acts of the board was to publish and mail to every fruit grower in this county a list of formulas for mixing the different sprays and washes recommended by the State Board of Horticulture and the Agricultural Department of the University of California. Accompanying this was an address to orchardists warning them against the encroachment of pests and the danger of neglect on the part of the grower. This address also stated that the commissioners had but one object in view—that of the advancement of the interests of the fruit industry. Later bulletins, bearing on the eradication of pests, and issued by the State Board of Horticulture, were distributed. In the mean time our local papers, the Pajaronian and Register, were printing everything that they thought to be of value to the orchardist. Their columns were free to any one who could give anything that would be of interest to the industry. Great credit is due these papers for the interest they have manifested in the welfare of the industry. I hope their good work has been fully appreciated.

**INSPECTION.**—Next came an inspection of the orchards. Pajaro Supervisorial district was found to contain 438 commercial orchards, with an aggregate of 626,500 fruit trees, on an area of upward of 9000 acres. Of this amount over 7200 acres are planted to apples, one-half of which are in bearing. This estimate does not include that portion of Pajaro valley which is in Monterey county.

This inspection revealed the fact that we had nearly every known pest of deciduous fruit trees—some of which are codlin moth, pernicious or San Jose scale, pear greedy or willow scale, brown scales, black scales, woolly aphis, green aphis, diabrotica, canker worm, tent and horn caterpillars. The inspection also brought to notice a long list of beneficial insects.

While many of the orchardists were found to be well informed and alive to the necessity of clean trees, good pruning and cultivation, a great number were found to be very indifferent as to the care of their orchards and were doing nothing toward pest fighting—depending upon Providence and climate to do it for them. Others were found who were destroying every insect possible—the most beneficial as well as the injurious.

Your commissioner received the most courteous treatment from the great majority of growers. A very few felt that it was nobody's business how their orchards were taken care of. Many days were spent in argument, exhortation, explanation and persuasion—pointing out the necessity of keeping our orchards free of pests, explaining the necessity of co-operation, aiming to impress upon each grower that he was vitally interested in the welfare of each orchard in the district—that the life of the fruit industry in our valley depended upon sending out clean fruit, honestly packed. Much time was spent in pointing out the injurious and the beneficial insects, explaining how to eradicate the first and how to encourage and protect the latter.

**EXHIBITION.**—Realizing the necessity of enlightenment concerning the most common insects a plan was formulated by which the orchardists and packers could quickly recognize those insects. Through courtesy of F. P. Krough, your commissioner was allowed space in his drug store to make an exhibit of insects. Considerable time was given to collecting and classifying insects with which the orchardist has to deal. Each kind was plainly labeled and the label

stated whether the insect was injurious or beneficial. An announcement of this exhibit was printed in the papers repeatedly, and although this exhibit remained three weeks, it is safe to say that not more than 25% of the orchardists and packers took enough interest in the matter to step into the store and examine the specimens.

**AGGRESSIVE WORK.**—The first open hostility of importance shown to the work of the Horticultural Commissioner was on the part of the Slavonian apple buyers. Early in May, 1900, the board sent a polite notice to each packing firm stating that an inspection of its packing house would be made on May 8th, and requesting that a member of the firm be present during the inspection. When the day arrived and the commissioners started on their tour of inspection they found each enclosed packing house locked, and each one which was not enclosed had a lock placed in a conspicuous place on the front of the building; and most of the places were deserted. The commissioners learned that day that a conspiracy had been formed by these people to prevent the inspection and defy the laws of the State. In some instances doors had to be forced. In every instance except one, where any one was found around these packing houses, we were either met with a challenge or with gruff protests against the inspection.

Our position has been impressed upon these people, and some of them are beginning to realize that a crusade against pests in their packing houses, as well as in the orchards, is to their advantage. But some of the packing firms continue to show hostility to the commissioners in their official work, and the instructions of the commission and the plain provisions of the law are not acquiesced in readily by these protesting packers. The commissioners are empowered to inspect orchards, nurseries, packing houses, store rooms, or any other place where fruit is grown or kept, and also the fruit grown, stored or on sale, and if found infested with scale insects or codlin moth, or other injurious pests, to have the owner of the property or fruit destroy the pests. All places so infested can be declared a public nuisance and be condemned. If the owner does not destroy the pests and abate the nuisance the commissioners can do it and the cost thereof will be a lien on the property, and the property can be sold to satisfy it. The Supreme Court has affirmed this law repeatedly. This law is for the protection of the interests of fruit growers, and it must be observed by those who buy and handle our fruits. They are not above the law and they will have to comply with it. The commissioners have no wish to harrass the fruit packers. They want to see them prosper and continue to do well. But they do not intend to permit the destruction of the reputation of our orchards and the value of the fruit industry through non-compliance with law. The packers will not be called down by the commissioners except for good cause. If they will live up to the pledge which they signed last year, for and guaranteeing a clean and to-grade pack of fruit, the relations between them and the commissioners will be harmonious, their business interests will be benefited, and the reputation of Pajaro valley fruit will be kept at a standard which will insure for it a good market each year. And at the same time we expect that each orchardist will carefully look after the cleanliness of his trees and fruit, so that only clean fruit will be grown for packers. Our duty therein to the packers is clear.

**AUXILIARY SOCIETY.**—Realizing that public sentiment is above and beyond law, also that for any movement toward the public good there must be first of all organization, a few who realized the predicament of our industry met and organized the Orchardists' Association. This society now numbers about 135 of the leading and most progressive orchardists of this community. Its membership should be 700. The object of this association is for the discussion of all subjects pertaining to the fruit industry—for the education and enlightenment of the orchardist. It is for the purpose of unionizing and banding together the individual orchardists for the mutual good and protection of all. To protect and guard jealously the reputation of our great and growing industry—the industry which if properly fostered will make Pajaro valley the wealthiest spot on earth.

### Pruning the Peach Tree.

E. Welch gives the Tree and Vine his ideas of pruning the peach, and they are interesting. He wisely says that to prune a tree properly requires some knowledge of the habits of the tree. There is no rule that can be laid down for pruning that will prove a success in all cases. There is a wide margin for use of judgment.

The peach will only grow fruit on the previous year's growth of wood. Some varieties have the habit of growing long limbs, with the majority of the fruit buds near the ends of the limbs. To head back or cut off one-third or two-thirds of the new growth on such varieties is to cut off the fruit buds to such an extent as to endanger the crop.

Pruning might be classified in two systems—the thinning out system and the heading back system. The thinning out system is to cut off the limbs at their base, or close to where they branch out from the tree or limb on which they grow. The heading

back system is to cut off a portion of the new growth of wood after thinning out as much as thought desirable.

Before the young tree is set the limbs should all be cut off close to the body, but not so close as to destroy the bud just below the limb. After setting the stem, cut off about 30 inches above the ground. That is all the pruning it wants the first year. The following winter or spring, before the leaves start, select about three limbs about equal distances apart around the tree for permanent main branches, one at the top of the stem or body of the tree, the other two a few inches lower to avoid crotch at top of stem.

This done, cut out a small part of the new growth, always cutting out the largest limbs, leaving the smaller ones to shade the body of the tree and prevent sunburn, also to make the body of the tree stalky and to cause the roots to reach out for nourishment to supply the top. Let the tree grow thick and scrubby while young. Every limb will cause the trunk to grow larger and the roots reach out faster. Many make the mistake of pruning too much while the tree is young.

The next season and thereafter follow the same course, doing some thinning on the main limbs, always leaving small growth to shade the main limbs and body of the tree, and also to bear fruit. Thin but very little in the middle of the tree. The small growth of this year will be the large growth to cut off next year, and consequently will be cutting back onto old wood, which has a tendency to cause new shoots to start on the main limbs, thereby keeping the bearing wood and the fruit distributed all through the tree instead of, as is often the case, principally at the tips of the main limbs.

The best time to prune either old or young trees, to secure a crop, is in the spring, when the leaves put out and the blossoms have fallen. At this time it can be seen what limbs to leave to get a crop.

Where there is a choice of limbs always leave the smallest, if by so doing there is fruit enough on them to insure a crop.

By exercising good judgment in following this method of pruning, many of the long, tall, bare limbs and open centers of trees so often seen can be avoided to a great extent, and a considerable portion of the fruit picked from the ground, with much less danger of trees breaking down by weight of fruit.

### The Splitting of Oranges.

**TO THE EDITOR:**—There has been considerable said in the PACIFIC RURAL PRESS lately concerning the splitting of the Washington Navel. I have given that matter a careful study for a number of years, and from close observation and investigation of the orange, particularly with the prematurely colored fruit, which is certainly the starting point of the trouble, and these are my conclusions: First let us take one of these oranges, carefully open the navel end, and you will invariably find a piece of orange bloom imbedded therein, either a petal, stamen or some part of the blossom of the orange. It seems to have fallen into the navel when small and stuck there, while the orange swelling covered it up; then as the orange further swells the moisture of the fruit causes the foreign substance to mildew or some other form of fungus to form, which either causes the orange to rot or in other cases split.

I should like to have Mr. Reed, or some one who is interested in the matter, examine some of the prematurely colored oranges carefully, and I am confident they will find, as I have stated, part of the blossom. Then let them take a glass, so that it will magnify it clearly. I have always particularly noticed that if it should rain on the trees while in bloom we are sure to have more damaged oranges than otherwise. Let us hear from some one else on the subject.

D. H. MURRAY,  
Supt. Oroville Citrus Association.

Oroville, Butte county.

## THE STOCK YARD.

### Wheat as Food for Stock.

The present high price of corn and the comparatively low price of wheat in the central West has induced the Minnesota Experiment Station to make a statement in regard to their relative feeding values.

**WHEAT AS FOOD FOR PIGS.**—Digestion experiments at the Minnesota Experiment Station have shown that when wheat was ground it was 10% more digestible than when fed whole; all of the nutrients, as protein, ether extract and carbohydrate, are about 10% more digestible in ground than in unground wheat. When wheat was fed whole the loss consisted largely of undigested kernels.

The main difference in the composition of wheat and corn is that wheat contains a larger amount of crude protein and a smaller amount of fat or ether extract than corn. The way in which wheat and corn are combined with other grains and feeds determines their values.

The results obtained at the Wisconsin Experiment



Station show that there is practically no difference in the quantity of pork produced from the same weight of wheat or corn. In four trials an average of 499 pounds of ground wheat were required to produce 100 pounds of gain in live weight. In two trials with cornmeal 498 pounds were required to produce 100 pounds of gain. When a mixture of equal parts of wheat and corn was fed better results were obtained than when either wheat or corn was fed alone. It required 485 pounds of mixed wheat and corn, half and half, by weight, to produce 100 pounds of gain in live weight. The conclusions reached are stated in the bulletins as follows: "The stockmen can easily compute the value of wheat for feeding hogs by remembering that one bushel of wheat will give about twelve pounds of increase on the average. When hogs are worth \$3 per hundred, then wheat would be worth 36 cents per bushel for feeding; at \$4 per hundred, wheat would be worth 48 cents for feeding, etc." "Whole wheat cannot be fed dry to hogs successfully. Wheat, when soaked, is very rarely fed. To secure the best results, wheat should be ground and fed moistened with water or milk. Better yet, as our experiments show, it should be mixed with some other grain. In the West this will undoubtedly be corn meal. For pigs and shoats, wheat is undoubtedly superior to corn, because it contains more muscle and bone building components."

**WHEAT AS FOOD FOR STEERS.**—At the Ohio Experiment Station, a comparison was made of the feeding values of corn meal and wheat meal for beef production. The experiment was continued for two years. Wheat bran was used as a part of the ration. Equal parts of corn meal and wheat bran were mixed and then, after the animals became accustomed to the feed, oil meal was added until it amounted to one-fourth of the entire grain ration. The coarse fodder consisted of clover hay and corn silage. To part of the steers wheat meal was substituted in the ration for corn meal; all other feeds remaining the same. It was found that fifteen to sixteen pounds per day of the corn meal mixture could be fed without experiencing difficulties.

The results of the first year's feeding were slightly in favor of the wheat meal. The second year corn meal appeared to give somewhat better results.

At the time the experiment was performed corn meal cost \$16 per ton, while the wheat meal cost \$20 per ton. The wheat bran, which formed a portion of each ration, cost \$16 per ton.

**WHEAT AS A FOOD FOR DAIRY COWS.**—At the Minnesota Experiment Station it was found that when wheat was fed in a ration at the rate of seven pounds per day, and was mixed with six pounds of bran and one pound oil meal, the results were practically the same as when three pounds of corn and four pounds of barley were fed in place of seven pounds of wheat. That is, seven pounds of ground corn and barley produced the same results in a dairy ration as seven pounds of ground wheat. "It appears that there is practically no difference between the feeding value in weight of ground wheat and ground corn and barley."

When wheat was fed at the Maine Experiment Station the results in milk yield were nearly the same as when corn meal was fed. Corn meal and wheat meal were considered to be about equal in feeding value for dairy animals.

At the Ontario Agricultural College wheat meal did not produce as good results as a ration consisting of one-half oats and one-fourth each of ground barley and peas. The mixed grain ration gave better results than the ground wheat ration.

**WHEAT AS FOOD FOR HORSES.**—Wheat as a food for horses was tested at the North Dakota Experiment Station. The wheat was fed at the rate of fourteen pounds daily and the horses were given an average day's work. It was found that wheat alone was not a satisfactory grain ration for a work horse. There was a tendency for the horse to get "off feed" and for the digestion to become deranged.

**SUMMARY.**—The results obtained when wheat was fed at the various experiment stations show that, as a food for growing pigs, it is somewhat preferable to corn; but that for fattening pigs there is but little difference between wheat and corn. The best results, however, are obtained when wheat is ground and fed with other grains. A mixture of equal parts of ground wheat and corn gives better results than either wheat or corn fed alone. Experiments show that ground wheat is 10% more digestible than whole wheat. When the price of wheat is low and it can be purchased for the same price per pound or less than corn, it will pay to use wheat in a ration. The manure from wheat-fed animals is more valuable than that from corn-fed animals. As a food for dairy animals ground wheat has been found to be fully equal to either corn or a mixture of corn and barley, and when fed to fattening steers ground wheat produced about the same results in a ration as ground corn. From the experiments that have been conducted it would appear that the value of wheat, as a food, depends to a great extent upon the way in which it is fed, and the foods with which it is combined. When properly used and combined with other grains wheat is a valuable animal food. In addition to its being equal to corn for fattening animals, and superior to corn for growing animals, it is also equal to corn in a dairy ration.

## THE FIELD.

### The Advantages of Farming.

Written for the PACIFIC RURAL PRESS by ERNST DOLGE.

We hear very frequently that there are other objects in man's life besides that of making money. Though this fact is generally considered beyond dispute, it seems to make only a slight impression on the most of us. In fact, the reigning query before anything is undertaken is, "What is there in it?" In the due process of evolution these conditions will change, and our schools and libraries will be important factors in bringing about another state of affairs.

Perhaps the above is a little pessimistic, but it will serve very well as an introduction to the topic. The point to be made is this: In considering the advantages of farming—especially fruit growing—we must eliminate the money making idea. Not because there is no possible means of accumulating wealth, but because the environments of the farmer are not generally favorable to such a condition. Of course, we hear of excellent returns now and again, but, taken as a whole, the fruit growing industry—or, in fact, any branch of agriculture—is not a strictly money making business.

But this alone should not put the horticultural pursuits to the rear, nor should it deter any young man who has a natural inclination for the work from making it the vocation of his life.

Whereas other pursuits soon become monotonous, farming ever offers a change of scenery, a change of work and of conditions; and, again, while many other vocations are fixed by set rules and are advanced so far that only the most talented and industrious can ever hope to push the science farther, farming allows every individual a free hand to work according to his own ideas, and is just now in the dawn of a new existence and of vast improvement, so that every industrious young man has a fair opportunity of assisting in this rejuvenation and doing some good for the rest of humanity. The satisfaction that results from having done some good cannot be described; it is the sole property of those who deserve it.

No other profession or vocation offers such splendid opportunities for one's betterment. The Government spends millions annually to educate the farmers by means of bulletins, books, experiment stations, object lessons and lectures, so that any wide-awake young man has plenty of sources from which to draw his education. Moreover, many State colleges have inaugurated free correspondence schools, through which anyone can take his regular course in agriculture, horticulture, dairying or animal industry.

What other calling can claim such advantages?

The professors in our universities have taken great pains to make all publications simple and clear, so that anyone can understand them. Some of them have written very thorough and plain books, which serve to put the young farmer on the same plane with his professional friends, and make him a leader in his line.

No one needs to hesitate because of meager opportunities for education.

In farming, the results of a man's labors depend as much upon his ability, conscientiousness and skill as they would in business or in a professional career, and his opportunities for acquiring these important factors of success are far greater.

Careful, industrious farmers make comfortable incomes throughout the land, and in fruit growing, where the most brains are required, the reward is the greatest.

Taking a philosophical view of life, we see that, after all, a man can only eat and sleep, do good and be merry. If anyone can find some occupation that affords him labor to his liking and gives him enough profit to allow him to partake of eat and sleep, of doing good and being merry, what more can he ask? The amount and quality of the above mentioned liberties depend entirely upon the man himself and upon what plane of existence he is satisfied to rest.

We hear of the "poor bootblack" and of the man who, by industry and ingenuity, built up a fine business of shining shoes. He was not satisfied to stoop before every man with a nickel all his life, and contrived the means that made him "boss" of other bootblacks. So with every other calling. The idler, the shiftless, thoughtless, careless fellow stays where some one was kind enough to put him, while the industrious, studious and conscientious man goes forward with rapid strides.

The farmer who will grasp his opportunities, who will constantly endeavor to better himself and those about him, is bound to succeed and to enjoy his life as no other man can.

The birds and the bees, the flowers and the trees all have their charm. The most interesting study is nature, with its boundless charms and continual change.

The freedom of the farmer and his independence of other men is a consideration for which his professional—and especially his business—friends envy him. To come and go, to work and play, to take and refuse, just as his good sense dictates, are liberties which no one enjoys so much as the farmer.

The many hours which the farmer has at his dis-

posal he can devote to study, and thereby train his mind as well as can his city friends. By such development his senses become keener and he understands better how to appreciate all that is beautiful about him.

Rural delivery and the frequent mail service generally aid the farmer in his efforts to keep up with the times. No up-to-date farmer is without his daily paper, his farm journals and his magazines. They are a part of his comfort and education.

Away from the vices and temptations of the city, alone with nature in all her glory, the right kind of a farmer is the ideal man—such as nature meant him to be.

Lamanda, Cal.

## THE POULTRY YARD.

### Seasonable Suggestions.

**TO THE EDITOR:**—Every year as the winter, or rainy season, draws near, many a person who has had no experience in poultry raising makes plans to engage in the business. Others have made a success of the business, and why should not they? They may; there is room for more in this line of farming, but there are many conditions to success.

For the week ended Nov. 4 of the current year more than 2600 cases of eggs were received in San Francisco from Eastern points. There were weeks in August and September when the importations amounted to over 3000 cases. The weekly receipts of California eggs in the city named averaged more than 3000 cases each week in September and over 2000 each week in October. So it is very evident that many more poultry yards will be established within our State before our home markets are supplied with eggs.

These facts give encouragement to the beginner in this business. One great error the novice makes is in branching out too largely at the first. He tries to do too much. Better the small beginning, learning the many details of the business gradually than to plunge at once into deep water.

It is because every year there are beginners in this business that the little details of poultry raising, the repetition of first principles, are eagerly looked for by these readers of our poultry papers, though this reading seems stale to those older in the business. Comparatively few persons have the faintest idea of the vastness of this industry in the United States. Census returns are incomplete, and yet the figures of 1890 show that there were then on our farms alone 258,871,125 fowls and chickens, nearly 11,000,000 turkeys, 16,000,000 ducks and geese, producing 819,722,916 dozen eggs.

Carload after carload of live poultry arrive in San Francisco each week from Eastern points. There must be money in the business, else these shipments would be discontinued. These several statements conclusively prove that it will be very many years before the flocks of this State adequately supply our local markets.

There has been a good demand for first-class eggs in the markets of this State this fall, and those persons whose flocks are laying well are happy. But fowls have been moulting heavily of late and the output of eggs has been curtailed to a great extent. Forty cents per dozen is a big price and there is money in egg farming at that figure. At even date last year the price averaged 34 cents. Fowls are now hardly through the moult, which accounts for the smaller output of eggs.

**FEEDING.**—If one has a good laying strain of fowls the next thing is to so feed them that they will lay well. To cause them to do this is a problem all poultrymen are trying to work out. Even the man who has satisfied himself that he has hit upon the best method for feeding for eggs thinks, possibly, that some improvement might be made. At least he is ever on the alert to find out how to feed to the very best advantage.

In fact this idea should have full possession of every one who keeps a flock of fowls, no matter how small that flock may be. Not only how to feed to best advantage, but how best to breed, care for and dispose of fowls and eggs. If there is any business that requires planning and good management it is this of poultry raising. Slipshod methods in the poultry yard will not bring success.

**HATCHING.**—Next month the incubators will be at work. From then on to next May there will be activity in the poultry yard. The reader who made mistakes last year will profit by that experience. But it is the next step in the business that is to many a most difficult one. Brooding and feeding the little ones during the first week or two requires great care and experience. That period tided over the balance of the way is very fair sailing. But take extra care of the very little ones. Remember that their lives depend upon the temperature of the brooders, the feed given them. This matter mastered, one will have success is generally assured.

Napa, Nov. 16.

A. WARREN ROBINSON.



## Agricultural Review.

### BUTTE.

**SHIPPING HEMP TO EASTERN MARKETS.**—Gridley Herald: John Heaney, who is engaged in hemp growing near town, shipped a carload of that staple to New York recently. This was the last shipment of the season, making a total of eight cars shipped since last March of the crop of 1900. Mr. Heaney is now gathering another crop, which is said to be the best one he has yet raised, and next year will probably have from ten to twelve carloads. The hemp grown by Mr. Heaney is said to be the best raised in the United States, the fiber being much stronger than that raised in the famous fields of Kentucky and elsewhere.

**ESTIMATE OF ORANGE YIELD.**—Oroville Mercury: W. J. Grier says it was thought some time ago that the orange crop of this region was a little shy, but the way the trees are turning off fruit shows that the crop is a good one. The groves he has charge of will turn off ten carloads. The Sergeant groves will yield this season fully forty carloads and the Hearst groves fully 100 carloads. Mr. Grier estimates the output of Palermo this season at 300 carloads. He estimates that the Palermo groves alone, when once in full bearing, will produce 1000 carloads of oranges.

**THE OLIVE CROP.**—Oroville Mercury: While the olive crop of this section is light this fall, yet, as the number of trees now yielding olives is greater than ever before, there will still be many olives turned out. At Palermo Mr. Cox for Louis Glass is buying freely and will pickle a large quantity of fruit. Mr. Robb for Ed Potter is also buying olives in quantity for pickles and oil. The Palermo Association will pickle a large quantity. Mr. E. W. Fogg of Thermalito and the Rancho Golden Grove will put up many hundreds of gallons. Small growers here and in Thermalito will handle a large quantity when taken together. The Ekman-Stow Co. will handle olives on a big scale, while the Ehmann Olive Co. will buy and cure more olives than ever before.

**LARGE CABBAGE.**—Oroville Mercury: Henry Steffens was down from Berry creek Monday with a load of delicious apples and of mammoth cabbage, the latter averaging from twelve to sixteen pounds each. His land is on a high hill, yet the ground is sufficiently moist that potatoes and cabbage grow with but very slight irrigation.

**FAST PLOWING.**—Oroville Register: Senator Shippee is plowing his land near Avon in a rapid manner. He has three gangs of five plows each attached to a big traction engine. The engine is an oil burner and gets up steam quickly, and makes fast time over the ground. Fifteen furrows are turned over at one time and the machine goes faster than a team and is not tired when the day's work is done.

### COLUSA.

**A BIG TURNIP.**—Colusa Sun: George Corby brought to our office this week a common turnip of the flat variety that measured 2 feet 5 inches in circumference. As it is of the flat kind, it weighed only 6½ pounds, but it would make a meal for any family. It is entirely solid. The turnip was grown in Mr. Corby's yard.

### LOS ANGELES.

**EARLY ORANGES BEING SHIPPED.**—Pasadena Star: Already many teams are hauling oranges to the packing houses, and Tuesday the Fay Fruit Co. shipped its first car for the season. Most of the early oranges from this section come from La Canyada and the higher foothill region.

### MONTEREY.

**SALINAS HORSES IN DEMAND.**—Salinas Index: The fame of Salinas horseflesh has spread both far and near, and when a fine team for carriage purposes is wanted the buyers come to Salinas, where they have their pick of some of the finest animals in the State. Recently President David Starr Jordan of Stanford came down with a view of purchasing a team belonging to J. B. Iverson. The deal was closed last night and Mr. Jordan will have his team shipped immediately.

### ORANGE.

**THRESHING ALFALFA.**—Santa Ana Blade: Bashore & Wright, owners of the big traction engine threshing machine, have been threshing alfalfa for Jos. Buckingham, and intend following up the work until all the alfalfa in the immediate neighborhood is threshed. It is estimated that directly around Santa Ana there will be about 35,000 to 40,000 pounds of alfalfa seed threshed this season, of which J. C. Thomas expects to thresh somewhere in the neighborhood of 18,000 pounds. Alfalfa seed sells for from 8½ to

9½ cents per pound wholesale, and the crop will be all marketed right at home.

### SAN BERNARDINO.

**CATTLE FOR CHINO HILLS.**—Chino Champion: We are informed by representatives of the Chino Land & Water Company that it is the purpose of that company this winter to stock the Chino ranch hill range with cattle. These hills are wonderfully rich with natural grasses, and in an ordinary season will easily sustain 4000 to 5000 head of cattle. Then the company has great resources in its alfalfa fields and sugar beet pulp for cattle feeding, either for beef or dairying. Its alfalfa fields cover over 800 acres, and seeding is now going on and will continue until some 1400 acres are seeded. To do this, it will be necessary to develop more water, and the company will, this winter, bore a number of artesian wells west of town that will furnish water to irrigate the stretch of country to the west of Steel & Green's dairy, which will be seeded to alfalfa. With 1400 acres of alfalfa, 50,000 tons of beet pulp and the rich hill range, the company will be in a position to do a handsome stock cattle and dairying business. This hill range had been heavily stocked until the dry seasons, commencing four years ago, reduced the grass.

### SAN DIEGO.

**THE RAISIN CROP.**—San Diego Union: Lewis E. Kent of Poway, inspector for the California Raisin Growers' Association, was in San Diego from El Cajon recently. He said the raisin growers were getting an advance on their crop as soon as brought to the packing house. The advance in one day was a little over \$17,000. Two cars were then being packed for shipment East. One goes to Milwaukee and the other to Minneapolis. He estimated the crop of the valley for the season at about 750 tons. A good many had already been shipped. The Raisin Growers' Association will handle at least four-fifths of the crop.

### SANTA CLARA.

**SPONTANEOUS COMBUSTION OF HAY.**—San Jose Mercury: A large barn belonging to S. F. Leib was destroyed by fire Monday afternoon. The fire originated in the second story of the barn, where about ten tons of hay were stored, and it was supposed to have been due to spontaneous combustion.

### SANTA CRUZ.

**LACK OF CARS FOR FRUIT.**—Watsonville Pajaronian: Only one empty car came in Tuesday, and there were thirty carloads of apples in packing houses boxed for shipment. The orange districts of Butte and Tulare counties and southern California are getting first call on fruit cars. The car shortage comes at a very bad time. This and next week should show a heavy movement in Newtowns if the holiday European markets are to be reached this year.

### SHASTA.

**A BUTTER FAMINE.**—Fall River Tidings: For a few weeks past a regular butter famine has existed here and there have been times when none of that article could be obtained at any price. Inquiry elicits the information that our local dairymen are sending their product to the timber camps and railroad towns where they get 50 cents a roll for it. One man, it is said, has, since harvest, sold 400 rolls in the Sisson market at the price stated. Tho Hat creek country, where dairying is carried on quite extensively, sends its butter to Redding, and there is not near enough of it to supply that market.

### SOLANO.

**FINE STOCK.**—Suisun Republican: C. E. Barnhart arrived here from Kansas City last Friday with eight carloads of high-grade and thoroughbred cattle. He has been absent for about two months and visited many of the Missouri stock farms before making his selections. One carload of the cattle was thoroughbred Short-horn bulls, but the rest were heifers, many of them thoroughbred and all of high grade. There were 524 altogether, and they have been taken to Mr. Barnhart's Maine Prairie stock farm. A finer lot of stock cattle has never been unloaded at Suisun.

### SONOMA.

**HORSE KILLED BY A BULL.**—Petaluma Courier: Wednesday evening a mare was gored to death and a valuable colt was terribly injured on the Asa Higgins ranch, between Petaluma and Vallejo, owned by Dr. George Ivancovich, who had a number of horses and cattle turned in a corral at the ranch. An angry bull, a blooded Jersey, accomplished its deadly work before help could arrive, and nobody saw the battle until it was nearly over.

**BROODER HOUSE BURNED.**—Petaluma Courier: The brooder house on the ranch of Peter Hansen, near Cotati, caught fire Wednesday. There were 600

chicks in the house and about 300, with the house, were burned. There was no insurance. The fire was due to carelessness in lighting the lamps.

**CHICKEN FEED HORSES MAY BE TAXED.**—Petaluma Argus: J. S. Blackburn and Dr. L. C. Kennon were closeted with the city council members in the city clerk's office Monday evening, discussing the chicken horse question. It has been proposed by the board of health to take some action which will result in the stoppage of the shipment of diseased horses to Petaluma from other sections of the State. There is talk of taxing every horse shipped in, an inspector to be paid from the tax money to be employed to inspect every horse sent here to be killed.

**RED POLLED CATTLE IN DEMAND.**—Santa Rosa Republican: Frank Ross, who came to this county from Oregon, has purchased a number of thoroughbred red polled cattle from different herds in the county. From Fountaingrove he secured a bunch of six, from the herd of W. D. Reynolds four were purchased, and from W. J. Doggett eleven were selected. Mr. Ross contemplates raising nothing but the best red polls in future on his Oregon ranges, and, with this end in view, he has made two trips to this section and taken with him the best that money could secure.

**WHOLESALE CHICKEN HATCHING.**—A monster hatching bee was held recently in a local incubator factory, when 3000 young chicks were hatched to demonstrate the working of incubators. The chicks commenced to appear early in the morning and kept coming in droves all day. They filled a big brooder as large as one of the main conservatories in Golden Gate Park.

### SUTTER.

**VACCINATING HOGS.**—Sutter County Farmer: In Colusa county and District 70 in this county the hog raisers have been experimenting with serum vaccination, and, from all reports, their hogs are getting better and the cholera has been checked. Those who own hogs should get posted on this matter and secure instruments and serum, so that prompt action could be taken if the disease appears in their herds.

**BIG BEANS.**—Sutter County Farmer: W. O. Wood brought in a pod full of beans one day last week which was rather out of the ordinary for size. It was 12 inches long, 1 inch wide and ¾ inch thick. The beans grew on a vine which resembles a small tree, and at present they are worth about 10 cents each for seed. This new bean is being given a trial in District 70, and may prove to be a valuable crop.

### TEHAMA.

**COYOTE FARMING.**—Red Bluff Sentinel: A man named Heitman recently killed a coyote near his place, 4 miles north of town. When examined the animal had a collar on, to which was attached a small chain 7 feet in length. Heitman thinks the animal had been kept for breeding, as the bounty in the county is \$5 for each head.

### TULARE.

**LET EGYPTIAN CORN STAND.**—Tulare Register: Growers of Egyptian corn have cherished the idea that they must cut the corn and get it under cover before the frost comes in the fall, but Jeff J. Lamarsna is our authority for saying that such is not the right policy. Woodville people who have suffered their corn to stay in the field until it is thoroughly ripened are strictly in it. The frost helps to dry it, it does not injure by rains as it does when in a pile, and can be taken from the field straight to the bin in less time by leaving it to ripen and dry on the stalks than in any other way.

### OREGON.

**CATTLE THIEVES BOLD AND ACTIVE.**—Ukiah, Nov. 17: One of the worst bands of cattle rustlers that ever infested the West is now operating in southeastern Oregon. The gang keep stockmen in a state of constant terror lest their cattle and horses be run off, buildings burned and themselves shot, should they complain. The rustlers are well organized throughout Great Malheur, Harrison and Lake counties, the gang numbering more than 100 men. Agents in each little town make trips through the surrounding country and note the number of cattle in each rancher's band, condition of stock and where they are to be marketed; then, when a campaign is planned, a detachment from the gang ride through the country, picking up one or two head out of each band, until a good-sized drove is formed, when they are driven southward by slow stages some 200 miles. The stock is all rebranded while en route, and when the shipping point is reached the cattle are placed on board the cars and started for Omaha or Kansas City. Ontario, in Malheur county, and Winnemucca, Nev.,

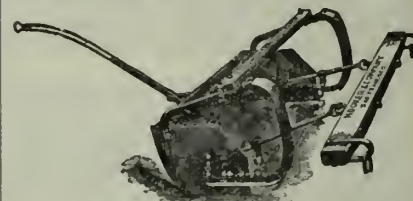
are the two shipping points generally used. No organized attempt to arrest the rustlers could succeed, as they have such complete control of the country. It is charged that the big cattle kings stand in with the rustlers, in order to secure immunity, and encourage them to prey on the small fry stockmen to get them out of the way.

### WASHINGTON.

**MAKING MONEY RAISING WHEAT.**—San Benito Advance: R. C. McCroskey, formerly of Hollister, who owns and cultivates 1400 acres of land near Garfield, Wash., has finished threshing his wheat and finds that he has a total of 36,000 bushels of wheat for this season's crop. Mr. McCroskey's crop averaged thirty-five bushels to the acre. He had about 1000 acres of wheat, the remainder of his land being in oats or other crops. He has figured all expenses of the crop just harvested and finds that his wheat cost him an average of 23 cents per bushel placed in the warehouse. He sold 15,000 bushels before the beginning of the harvest for 45½ cents per bushel. Wheat is now worth 40 cents per bushel, and if it were all sold at the present prices Mr. McCroskey would net 17 cents per bushel, or \$5.95 per acre from this single crop. But adding the amount sold at 45 cents per bushel makes the total average, if the remainder were sold at the present prices, \$6.87 per acre net profit. Multiplying this by 100, gives a total net profit on this crop of wheat of \$6870.

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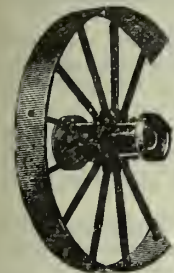


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**MARQUIS.** REGISTERED NO. 9017. Weight 1750; bred by J. D. Patterson, Oxnard, Cal.; foaled March 25, 1895. Sire, imp. Montebelle 3298 by Cæsar; dam, imp. Maria I 2450 by Hercules.

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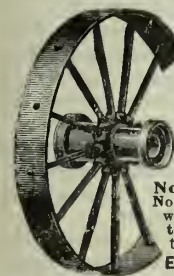
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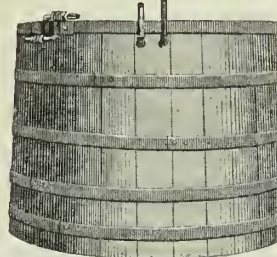
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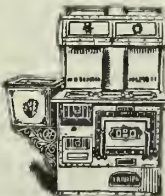
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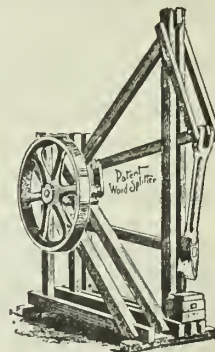
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## THE HOME CIRCLE.

## "Not As I Will."

Blindfolded and alone I stand  
With unknown thresholds on each hand;  
The darkness deepens as I grope,  
Afraid to fear, afraid to hope;  
Yet this one thing I learn to know  
Each day more surely as I go,  
That doors are opened, ways are made,  
Burdens are lifted or are laid,  
By some great law unseen and still,  
Unfathomed purpose to fulfill,  
"Not as I will."

Blindfolded and alone I wait;  
Loss seems too bitter, gain too late;  
Too heavy burdens in the load  
And too few helpers on the road;  
And joy is weak and grief is strong,  
And years and days so long, so long,  
Yet this one thing I learn to know  
Each day more surely as I go,  
That I am glad the good and ill  
By changeless law are ordered still,  
"Not as I will."

"Not as I will," the sound grows sweet  
Each time my lips the words repeat.  
"Not as I will," the darkness feels  
More safe than light when this thought  
steals

Like whispered voice to calm and bless  
All unrest and all loneliness.  
"Not as I will," because the One  
Who loved as first and best has gone  
Before us on the road, and still  
For us must all his love fulfill,  
"Not as we will."

—Helen Hunt.

## After a Broken Engagement.

All the world—our world—had known  
of our engagement from the first, but  
none—except ourselves—yet knew that  
it was at an end. All our friends had  
prophesied it, every one had congratulated us and feted us when it had come to pass. Every one would be filled with consternation when it became known that it was at an end. Therefore I wished to put off that disagreeable day.

Our last assembly dance was to take place Friday night. I had never missed one before, but I intended to be absent from this. It would cause comment, but not so much as if I should attend and avoid Agatha—as, under the circumstances, I must. I had cast about to find some place to go and finally had thought of Corey.

Corey is an old bachelor friend who lives like a hermit among his books in a cosey "box," as he calls it, some 40 miles from town. And I have his standing invitation to "run down and take pot luck at any time." I had been there once, just before my engagement. I would go again on Friday and spend Sunday with him. I wrote and received his characteristic answer: "All right, old fellow. Come!"

So I made my preparations and was just about leaving my office on Friday afternoon when this letter from him reached me:

"I've been called over to Philadelphia on business, and can't get home till Saturday noon. But come all the same. You know the house, and the key will be in the same old place. Make yourself at home. You will find eatables, drinkables and smokables set out for you in the dining-room. And your bed is in the room upstairs next to mine. Mrs. O'Grady, my dame of all work, sleeps at her own home, and will let herself in, as usual, somewhere in the dark hours near dawn. She will get your breakfast whenever you appear. All that I own is at your service, therefore come!"

Under any other circumstances I should have postponed my visit until my host should be at liberty to receive me, but as things were, I hurried along, only to find that I had just missed my train. The next train did not leave until half-past eight, so I whiled away the time in a near-by restaurant over a supper I could not eat, and went over my grievance against Agatha again.

And I certainly felt that I had a grievance—if ever man had one against a maid. In all the course of our engagement we had had no falling out until this fateful one, and I had every reason to believe that she was fondly and faithfully my own. Fortunately I had

been undeceived in time, and it had happened in this way:

A few days ago I had left my office unusually early, and had started uptown on purpose to select a wedding present for my betrothed. For the day was drawing near, and as yet I had not been able to decide between a diamond bracelet or a jeweled ornament for her lovely auburn hair. As I walked along, pondering this perplexing question, I looked up and saw Agatha on the corner of the street. Evidently she was expecting some one, though it could not be myself, for never before had I come uptown at that hour. But how pleased and surprised she would be to see me, I thought!

I was awaiting with pleasant anticipation the moment when she should catch sight of me, when suddenly a man—a perfect stranger to me—walked up to her, and her manner of greeting him plainly showed me that he was the one for whom she had been waiting there. Immediately they started off together and I followed—only to see them enter the very jewelry store for which I had been bound!

So I went straight on to my lonely room and brooded over woman's falseness and deceit. But I would be just, and Agatha should have a chance to explain things—if she could.

She welcomed me that evening with her usual warmth. My coldness certainly surprised her still more when I asked—without any beating about the bush—who it was she had met at such an hour on such a street, and what their errand at the jeweler's had been?

She stared at me and answered, womanlike, by the counter question, how did I know?

"I saw you!" I said savagely.

Her reply to that was rather scornful: "I did not know before that you were a spy!"

"At least I have the right to ask you—"

"And I the right to refuse to answer—I am not married to you yet!"

"Nor ever will be, unless you give a satisfactory reply to my questions now," I declared hotly.

"Is that your ultimatum?" she said, with a strange smile. "Then listen to mine—I hate a tyrant and I refuse to answer?"

And then and there she gave me back her ring.

And her amazing words were final. I left her without having obtained an explanation, and with our engagement at an end.

I had not seen her since, nor did I desire to see her.

At last it was train time, and at last I had reached the forsaken station where not even the customary dilapidated vehicle awaited me. But it was not a long walk to Corey's "box," and it surprised me to see how well I remembered the way even in the dark, for the clouds obscured the moon.

Presently I had reached the cross-roads and there turned to the right. Then one, two, three detached cottages were passed and Corey's place was reached. How familiar its outline seemed as it loomed, dark and shadowy, before me.

I stumbled on the low piazza step where I dropped my bag while I ran my hand up the inside of the nearest pillar, feeling for the nail on which Corey always hung the key. But I failed to find it and was groping for it, when—

heavens! I heard the barking of a dog! I am not altogether a coward, but I do own up to a strong aversion to strange and savage dogs, and my first impulse was to find shelter as speedily as possible.

Corey was careless, ten chances to one the parlor window was unlocked. I sprang for it and though it stuck I managed to force it up. The next moment I was safely housed and the window shut upon the dog which was on the piazza yelping savagely.

But my tribulations were but begun. I had not recovered my breath before I heard another dog in the hallway overhead. If Corey had mentioned that he kept such brutes I never should have come!

As I hastened to close the door between the animal and myself I ran into something tall which fell with a crash.

And immediately from the strong odor which arose I knew I had overturned a lamp!

But the door was closed in time, though the beast was soon scratching at it and barking furiously at me from the other side.

I was hot and angry. Besides that I was conscious of feeling hungry, and how was I to get the supper which was spread for one in the dining-room, with this brute's jaws watering for me in the hall? If this was a joke that Corey had played off on me, he should pay dearly for it on his return.

I put my hand in my pocket for a match, then remembered that, after lighting my cigar on the way from the station, I had thrust my matchbox into the pocket of my overcoat, which now lay with my bag on the outside, well guarded by the first of those savage dogs!

Was ever a man in the house of his friend in such a plight before? I tried in vain to find a match or a couch or a comfortable chair in that dark and cheerless room. But not one of these could be found. And I dared not stretch my weary length upon the floor for fear that some meandering stream of kerosene from the shattered lamp might reach me during the night. So I sat bolt upright in a dreadful wicker chair and wondered how a man like Corey could have such an abomination in his house.

The night seemed centuries long, and though I thought I had not closed my eyes, toward morning I must have dozed, for I came to myself in the dawn's gray light feeling stiff and lame, yet with a sense of relief at the stillness, for that infernal barking finally had ceased.

I wondered if I could not quietly make my way up to my bedroom and get a comfortable nap there before the day began. So I tip-toed over to the door and turned the knob. To my amazement

the door remained fast closed. It was locked—on the outside!

Now who was in the house to make me prisoner in so ridiculous and humiliating a way?

I went to the window and started to raise the sash, when both dogs began their outrageous racket again.

So then I lowered the window from the top, and, mounting a chair, leaned out at a safe distance from the vicious beasts below.

Immediately I heard a voice—a woman's voice.

"Man," it said, "stay where you are, for, besides the dogs, I have a revolver—and I am considered a good shot!"

My blood began to boil. Corey's woman-in-charge was taking advantage of his absence to carry things with a high hand.

Just beyond the front door a bay window projected on the piazza, and evidently my jailer was on guard in there behind the blinds.

"Woman!" I cried, savagely, "call off your dogs and put your pistol up, or when your master comes you will find you have been less smart than you think yourself to be."

"My master!" came in tones of indignation. "No tyrant ever had or ever shall have control of me!"

There was something strangely familiar in both that sentiment and voice. I leaned far out, looking eagerly toward the concealed figure behind the blinds.

"Agatha!" I cried, and in answer came her cry of astonished recognition. Then silence fell, save for the intermittent barking of those fiends.

My amazement knew no bounds, but it was accompanied by furious indignation at the imprudence of her conduct.

"Agatha!" I cried; "in heaven's name, why did you come here?"

"It seems to me," she retorted with some asperity, "that that is a question

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Founded 1855.



I should ask you. What right had you to come here and force your entrance to this house—like some rowdy burglar—and frighten me half to death?"

"I regret to have frightened you—if you had not set those dogs on me I should have been quiet enough. But as for you—think what the world will say should it ever come to know."

"The world will say what I say—that you are the most cowardly and contemptible of men, to come deliberately to this house in such a way, when I was here alone—"

"But, alone or in Corey's company, the world will be likely to ask first how happened you to be here at all."

"I do not know what you mean to insinuate—certainly my being here alone was an unfortunate accident. But, alone or not alone, I have a perfect right to the shelter of my own cousin's husband's house."

"Now don't prevaricate," I said, sternly, "for Corey is not a married man."

"Corey again! Pray, who is this Corey—and what has he to do with me?"

A sudden chill crept over me as a suspicion at last penetrated my dull brain.

"In heaven's name, in whose house am I, then?" I gasped.

"In the house of my cousin's husband—John Foster, the Philadelphia jeweler—who has just rented this place. And he was the man you saw me meet that day—if you want to know. And he very kindly helped me select a fine watch as a present for you—which won't be needed now—since, fortunately, I've found out what you are in time. And I came down here yesterday unexpectedly because—well, because I didn't care to attend the assembly dance. And after I reached here and found that the family were not coming until to-day, I borrowed the station master's dogs. But why I should tell you all this I don't know. And how you knew I was here, and why you followed me in such a contemptible, sneaking way, I cannot imagine."

"Agatha," I said, very humbly, "I never knew you were here at all. But I had the same reason you had for wanting to escape that dance, so I sent word to my friend Corey—and though he was away last night, he wrote for me to come—and I swear to you that all this time I thought I was in his house."

And then, after a moment's silence, I heard her ringing laugh.

"I counted the houses from the cross-roads," I added, in self-defence, "and his used to be the fourth—"

"A new house is being built just below here," she said, and laughed again.

"Agatha," I said, finally, "I humbly beg your pardon—for everything; and don't you think I've been punished enough. If you will call off that dog, I will go."

It was amazing to see how eagerly the little beast obeyed her summons and leaped inside the blind she partially opened to admit him.

Then I got out of my window and picked up my overcoat and bag.

"Oh, I must tell you that I'm afraid I've done some damage in there—in the dark I upset the lamp," I said, apologetically.

"Yes, I heard it—and afterward I smelt it," she replied, demurely.

"Agatha!" I cried, going nearer to the blinds, "I was an ugly brute, but I was mad with jealousy. Can't you forgive me? It was all because I love you so! Oh, just let me see your face!"

"Sir," came in musical tones, "I beg you to remember that I am all alone in this house!"

"When may I see you, then?"

"The family will arrive at noon. If you choose to call on them this evening—with your Mr. Corey—I cannot prevent it."

"Not until evening?"

"Not until evening!"

"At least you will let me give you back your ring. It is in my pocket now—"

"But I positively refuse to see you or to take anything from you—now—"

Then I was inspired! I kissed the sparkling ring and laid it on the seat beneath the window. "But it is your own," I said, "and always has been

yours. Forget our foolish quarrel and let me find it on your hand when I see you to-night."

And when I had passed the gate and, turning, saw a fair white hand and arm extended to take the ring, my mind was made up on the spot that a jeweled bracelet should be her wedding gift.

Corey came back at noon. He made me welcome and gave me news of his new neighbors, with whom he had come over on the train.

"Their cousin met them at the station," he said, "a mighty pretty girl. Oh, you sly dog!" he broke out with a laugh. "Now I understand why you were so anxious to renew my acquaintance and come down here just now. Well, I congratulate you, happy man!"

"But how do you know I am a happy man?"

"Her blush when your name was mentioned was enough to enlighten me—that and her very brilliant engagement ring. By the way, they want us to spend the evening with them, and that means a rubber of whist for me with the elders—while you two youngsters sit outside in the dark and spoon."

Corey did not express it very elegantly, but that was precisely what did take place.—Springfield Republican.

#### Intemperance in Eating.

"Intemperance in eating has as much to do with the ills that flesh is heir to as intemperance in drinking, and perhaps more," said an ex-army officer who is now living in this city. "Several years ago, when I was stationed at Benicia barracks, near San Francisco, nearly all the members of our mess got into rather bad shape. We took on flesh rapidly, our livers refused to act properly, we became fat and flabby and we were a burden to ourselves and each other. Perhaps the climate had something to do with it, yet it is generally conceded that this climate is a healthful one. Finally, on the advice of an old surgeon who was acclimated, we decided to eat but one meal a day—that is, one real big meal. Our breakfast consisted simply of coffee and rolls, but was relished, however, and eagerly eaten. Everything else was tabooed. Dinner was served at four o'clock in the afternoon, and it was served most generously. For the first few days we all became ravenously hungry about the middle of the day, but after awhile we grew accustomed to the change, and I never felt better than during the two years I conformed to this diet."—Philadelphia Record.

"WHEN are you going to marry the floor-walker?" asked the girl behind the catchup counter.

"Oh, that's off," said the girl in charge of the sugar counter.

"He says we can't afford to marry on my salary, and he needs his own to support the dignity of his position."—Chicago Tribune.

UNDERTAKER (to bystander at funeral)—"Are you one of the mourners?"

Bystander—"I am, sir."

Undertaker—"What relation to the deceased?"

Bystander—"None at all; but he owed me five dollars!"—Chicago News.

"DESE hoss'less kerriges ain't so much," said Mr. Erastus Pinkly.

"Dey's all de talk," replied Miss Miami Brown.

"Co'se dey is. But it's a back number scheme. What were de fust steamship but a muleless canal boat."—Washington Star.

TOMMY—"Mama, why have you got papa's hair in a locket?"

"His mother—"To remind me that he once had some, Tommy."—Jeweler's Weekly.

"EDMUND, what made you so late?"

"My dear, I came up in my new automobile, and passed the house five times before I could manage to stop."—Illustrated Bits.

## DOMESTIC ECONOMY.

### Domestic Hints.

PLUM CATSUP.—Wash the plums and stew until tender in enough water to prevent burning, then strain and weigh. To four pounds of pulp allow one pound of sugar, four teaspoonfuls of cinnamon, two teaspoonfuls of cloves, two teaspoonfuls of pepper, and salt to taste. This is an excellent relish to serve with roast meats.

LITTLE NECK BROTH IN CUPS.—Procure three dozen Little Necks in the shell; wash them well in cold water; put them in a saucepan; cover with a quart of hot water; boil fifteen minutes and drain. Remove the shells; chop up the clams, and add them to the hot broth with a pat of butter; salt if necessary, and add a little cayenne. Boil ten minutes, and serve hot or cold in cups with toast or crackers.

NUT COOKIES.—Take one pound of light-brown sugar, one cupful of lard, two well-beaten eggs, one cupful of sour milk, one heaping tablespoonful of soda and one cupful of chopped hickory nuts, flour enough to roll out. First put sugar and lard together and work to a cream, next add the eggs, then the milk, into which stir the soda, then add the nuts and then flour to stiffen; have the oven hot, so they will bake in about three or four minutes.

DUMPLINGS TO SERVE WITH CHICKEN.—These are best baked. Rub a tablespoonful of butter into a quart of flour; add two teaspoonfuls of baking powder, a teaspoonful of salt, and mix thoroughly. Add sufficient milk (a cupful and a half) to just moisten. Roll out  $\frac{1}{2}$  inch thick; cut with a cutter about the size of a silver quarter; stand in a baking pan; brush the tops with milk, and bake in a quick oven for fifteen minutes. Break these into halves; run them back into the oven for ten minutes; put them around the dish, and pour the sauce over them.

HALIBUT.—Take two cupfuls of cooked fish, one-half cupful of mashed potatoes, two cupfuls of cream or milk, one tablespoonful of Parmesan cheese, three tablespoonfuls of butter, one tablespoonful of corn starch and the yolks of two eggs, salt and pepper to taste. Beat the potatoes until light and creamy, with the yolk of one egg; melt two tablespoonfuls of butter, add the corn starch, stir until smooth; add the cream, stir until the sauce thickens, take from the fire, add the remaining egg yolk, fish and seasoning. Fill a greased baking dish with alternate layers of potato and fish, cover the top with bread crumbs, mixed with the cheese and the remaining tablespoonful of butter, melted; cook for twenty minutes in a quick oven.

WHITE MOUNTAIN CAKE.—Beat six ounces of butter and eleven ounces of powdered sugar to a cream; then add the yolks of five eggs and beat the whole until very light; add a teaspoonful of vanilla, the juice and rind of a lemon and a quarter of a teaspoonful of powdered mace. Beat the whites of five eggs to a stiff froth; add them and half a pint of milk gradually and alternately to the batter. Sift together half a pound of flour, three ounces of corn starch and three heaping teaspoonfuls of baking powder, and add gradually to the mixture, beating thoroughly and quickly all the while; then pour into greased jelly tins and bake in a quick oven for ten or fifteen minutes. For the filling, boil together half a pound of powdered sugar and a gill of water until the mixture forms a heavy thread when dropped from a spoon. Beat the whites of two eggs until very stiff, then stir in at once gradually the boiling syrup, beating quickly all the while. Beat until cold and thick, then add a teaspoonful of vanilla.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Nov. 26, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	71 1/4 @ 72 1/4	75 1/4 @ 76
Thursday.....	72 1/4 @ 71 1/4	75 1/4 @ 75 1/4
Friday.....	71 1/4 @ 72	75 1/4 @ 75 1/4
Saturday.....	72 1/4 @ 72 1/4	75 1/4 @ 76
Monday.....	72 1/4 @ 72 1/4	76 1/4 @ 75 1/4
Tuesday.....	72 1/4 @ 71 1/4	76 @ 75 1/4

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	Dec.	May.
Wednesday.....	39 1/4 @ 40 1/4	40 1/4 @ 41 1/4
Thursday.....	40 1/4 @ 40 1/4	41 1/4 @ 41 1/4
Friday.....	40 1/4 @ 41 1/4	41 1/4 @ 41 1/4
Saturday.....	41 @ 42 1/4	41 1/4 @ 42 1/4
Monday.....	43 1/4 @ 42 1/4	43 1/4 @ 42 1/4
Tuesday.....	@	@

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 00% @	@
Friday.....	1 00 @	1 04% @ 1 04 1/4
Saturday.....	99% @ 1 00	1 04% @ 1 04 1/4
Monday.....	1 00% @ 99 1/4	1 04% @
Tuesday.....	99% @ 99 1/4	1 04% @
Wednesday.....	@	@

## WHEAT.

There has been no great activity manifested in the local market since last review, nor have conditions been noteworthy as favoring the selling interest. Quotable values remained much the same as preceding week, but buyers did not take hold very freely at full current figures. Although there has been lately a tolerably free outward movement of wheat from this port, shippers are in most instances still fairly well provided with reserves secured early in the season, when selling pressure was more pronounced and the market was more favorable to buyers than during the greater part of the current month. At no time in the past few weeks, however, has the market been especially noteworthy for strength, nor are prospects at the moment encouraging for very good figures, or such as would afford fairly profitable returns to the grower, being established this season. Foreign markets have been reported in the main fairly steady but by no means active. Ocean freight rates and grain charters have not changed materially since last report, but there was more firmness displayed than for a week or two preceding, the present good crop prospects for coming season tending to check the crowding of ships to engagement at lowest figures lately current. Desirable iron ships were this week reported chartered at 35s 9d to Europe, usual option as to destination.

California Milling.....	1 02 1/4 @ 1 05
Cal. No. 1 shipping, alongside.....	98 1/2 @ 1 00
Oregon Valley.....	98 1/2 @ 1 01 1/4
Washington Blue Stem.....	1 00 @ 1 05
Washington Club.....	97 1/2 @ 1 00
Off qualities wheat.....	92 1/4 @ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s 2 1/4 @ 6s 3d	5s 10 1/4 @ 5s 11d
Freight rates.....	40 @ 42 1/4 s	34 @ 35 1/4 s
Local market.....	98 1/2 @ 1 01 1/4	98 1/2 @ 1 01 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.00 3/4 @ 99 1/2 c.
May, 1902, delivery, \$1.05 @ 1.04 1/4.
Tuesday, at regular noon session of Call Board, December, 1901, wheat sold at 99 1/2 @ 99 1/2 c; May, 1902, \$1.04 1/4 @ —.

## FLOUR.

Market is without appreciable change, either as regards general tone or quotable rates. There are fairly liberal supplies, and more than is required to accommodate the immediate demand. Recent shipments to the Orient and to South America are not as heavy as they were a month or two ago.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

There have been no evidences of heavy quantities of this cereal changing hands in this center since last review. Values have ruled fairly steady, however, hold-

ers not being inclined to crowd stocks to sale at material concessions from existing rates, which are certainly low enough. The outward movement is showing decrease, which is to be expected at this date, but it is altogether probable that shipments will continue on a moderate scale for some months to come, especially if prices continue at or near the rather low levels which have been current thus far this season. Business on local account has been principally in feed descriptions, with offerings of this sort more than sufficient to accommodate the existing demand. Trading in the speculative or Call Board market was light and fluctuations kept within narrow bounds.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	75 @ 82 1/4
Chevalier, No. 1 to choice.....	92 1/4 @ 1 00
Chevalier, poor to fair.....	75 @ 85

## OATS.

Values are being maintained at much the same range current for several weeks past, the steadiness being more attributable to absence of undue selling pressure than to active demand at full figures ruling. Arrivals and offerings of Oregon and Washington oats are not of as large volume as ordinarily experienced at this time of year.

White Oats, fancy feed.....	1 25 @ 1 30
White, good to choice.....	1 15 @ 1 20
White, poor to fair.....	1 00 @ 1 10
Gray, common to choice.....	1 10 @ 1 20
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 25 @ 1 30
Black Russian.....	95 @ 1 20
Red.....	1 07 1/4 @ 1 25

## CORN.

Market continues to show unsettled condition. A large proportion of the corn now offering is damp, while the positive inquiry is almost wholly for dry stock. For damp or otherwise faulty corn the market is weak. Quotations are based mainly on values for good to choice dry.

Large White, good to choice.....	1 40 @ 1 50
Large Yellow.....	1 25 @ 1 35
Small Yellow.....	1 40 @ 1 50

## BEANS.

Demand has continued fairly active for white beans, with transfers mostly of Large Whites or Lady Washingtons, these constituting the bulk of present offerings of white descriptions. Good to choice Large Whites have been selling to very fair advantage, and if the growers who have been lately unloading always realize as good figures they will have no cause for complaint on the score of values. Limas are not offering in very heavy quantity, either on the spot or to arrive, and former values continue current. Business doing in colored beans is principally in Bayos and Pinks, with the latter offering more freely than the first named and inclining least in favor of the selling interest. In a speculative way, however, there is more disposition to take hold of Pinks than of most other varieties. Beans which are heavy with adobe or otherwise seriously faulty will not command quotations.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	3 15 @ 3 35
Lady Washington.....	2 90 @ 3 10
Pinks.....	2 80 @ 3 20
Bayos, good to choice.....	2 40 @ 2 60
Reds.....	3 00 @ 3 25
Red Kidney.....	3 25 @ 3 75
Limas, good to choice.....	4 50 @ 4 75
Black-eye Beans.....	3 25 @ 3 75
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

Most of the millers and dealers are well stocked with Green, and sales of this variety are not readily effected, especially at other than low figures. Market for Niles Peas is moderately firm at the quotations, offerings of same being rather light.

Green Peas, California.....	1 25 @ 1 75
Niles Peas.....	1 50 @ 1 60

## WOOL.

There is no lack of demand for good to choice wools at values much the same as have been current for some weeks past. Not much of above kind now remains unplaced. Heavy and defective wools continue out of favor, but with little of any other sort at present obtainable, it is likely that low grade stock will receive a little more attention in the near future. That that there will be any noteworthy quantity of wool on the market at the close of the season does not now appear probable.

## SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Humboldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 10
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10

San Joaquin and Plains.....	6 1/4 @ 8 1/4
San Joaquin Lambs.....	7 1/4 @ 9

## HOPS.

Market is without improvement as regards inquiry in a wholesale way or in prices obtainable for offerings from first hands. While quotable values remain nominally about as previously noted, free sales at these figures are not possible at this date. Many growers who have not yet sold are holding off, anticipating a better market in the Spring. While there is a possibility of better prices later on, it is the exception where any particular strength is developed in the hop market late in the season.

Good to choice, 1901 crop.....	10 @ 12
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## HAY AND STRAW.

The hay market has been in the main quiet since last review, with tendency to slightly easier prices for most descriptions, although in the matter of quotable rates there were no special changes established. Stocks of hay in the region tributary to San Francisco market, as reported by the Hay Exchange, were on 1st inst. 119,600 tons, as against 99,600 tons a year ago, 157,375 tons in 1899, 103,660 tons in 1898, 80,115 tons in 1897, 124,150 tons in 1896, and 106,650 tons in 1895.

Wheat, good to choice.....	9 00 @ 12 00
Wheat and Oat.....	8 00 @ 11 00
Oat.....	6 50 @ 9 00
Barley and Oat.....	6 00 @ 8 00
Barley.....	6 00 @ 7 50
Volunteer.....	5 00 @ 6 50
Alfalfa.....	7 00 @ 9 00
Clover.....	5 50 @ 7 50
Stock.....	5 00 @ 6 00
Compressed.....	9 00 @ 12 00
Straw, 1/2 bale.....	35 @ 47 1/2

## MILLSTUFFS.

Market for all descriptions of mill offal has continued to incline in favor of buyers. Rolled Barley was held about as last quoted. Values for Millod Corn are unsettled, with prospects of soon ruling easier.

Bran, 1/2 ton.....	15 50 @ 16 50
Middlings.....	18 00 @ 20 00
Shorts, Oregon.....	16 00 @ 17 00
Barley, Rolled.....	16 50 @ 17 00
Cornmeal.....	30 00 @ 31 00
Cracked Corn.....	29 00 @ 30 00

## SEEDS.

Values for Mustard Seed are ruling steady, with no heavy spot stocks and no large quantities offering to arrive. Flaxseed is in only moderate receipt and is going mainly to the oil works, under contract. Business doing in bird seed is of moderate volume and at generally unchanged figures.

	Per cth.
Flax.....	2 65 @ 3 25
Mustard, Yellow.....	3 25 @ 3 40
Mustard, Trieste.....	3 00 @ 3 15
	Per lb.
Canary.....	3 1/4 @ 3 1/4
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/4

## BAGS AND BAGGING.

No noteworthy developments to record in this line and none likely to be experienced for a month or more to come. Quotable values remain nominally as previously noted.

Calcutta Grain Bags, spot.....	7 1/4 @ —
San Francisco Grain Bags, 2x36, spot.....	7 @ —
Wool Sacks, 4 lbs.....	35 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 34
Fleece Twine.....	8 1/4 @ —
Gunnies.....	— @ —
Bean Bags.....	5 1/4 @ 5 1/2
Fruit Sacks, cotton, three sizes.....	5 1/4, 6, 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/4

## HIDES, PELTS AND TALLOW.

The Hide market showed generally healthy condition, with no heavy offerings and a good demand at prevailing values. Pelts are in fair request at steady prices, and no special changes are looked for in quotations in the near future. Tallow of desirable quality is meeting with custom about as rapidly as offered, prices remaining without quotable change.

## HONEY.

Not much doing in this center, but there are no large stocks here of any description, and current values are being, as a rule, well maintained. There is more moving outward at present from southern producing points than from here. Some apiarists are reported holding back supplies, anticipating better prices in the Spring.

Extracted, White Liquid.....	5 1/4 @ 6
Extracted, Light Amber.....	4 1/4 @ 5
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	11 @ 12 1/4
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7

## BEESWAX.

Values previously quoted are being well maintained. Spot stocks are of decidedly light proportions. There is a fair demand, mainly for shipment to Europe.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

The market for Beef is firm at the quotations, with supplies only moderate and demand good. The advanced prices quoted last week on Mutton continue in force, with market steady. Lamb is selling to very fair advantage, offerings being rather light. Veal is not arriving in heavy quantities from any quarter and is meeting with prompt custom at full current figures. Hogs have been commanding steady prices, and there is nothing to warrant anticipating materially lower values in the near future.

Beef, first quality, dressed, net 1/2 lb.....	6 1/4 @ 7
Beef, second quality.....	6 1/4 @ —
Beef, third quality.....	6 @ —
Mutton—ewes, 6 1/4 @ 7c; wethers.....	7 @ 7 1/4
Hogs, hard grain fed, 150 to 250 lbs.....	5 1/4 @ —
Hogs, small, fat.....	5 1/4 @ —
Hogs, large, hard, over 250 lbs.....	5 1/4 @ —
Hogs, country dressed.....	7 @ 7 1/4
Veal, small, 1/2 lb.....	7 @ 9
Veal, large, 1/2 lb.....	8 @ —
Lamb, spring, 1/2 lb.....	8 @ 8 1/4

## POULTRY.

There was a fairly good demand for poultry of all kinds, but Turkeys were naturally most in request, as is invariably the case Thanksgiving week. Choice Dressed Turkeys sold mainly at 17@18c, (up to Tuesday noon, date of this writing), some very select stock going a little higher, while poor birds sold down to 12@14c, with few buyers for latter sort at any figure. Business in Live Turkeys was not so active as in Dressed, but good to choice Live met as a rule with tolerably prompt custom, sales being mostly within range of 13@15c. Aside from Turkeys, the inquiry was principally for choice young chickens, although fat Ducks and Geese in fine condition were by no means neglected. Pigeons, young and old, brought much the same figures as were current the preceding week.

Turkeys, dressed, choice.....	16 @ 18
Turkeys, alive, Hens, 1/2 lb.....	14 @ 15
Turkeys, alive, Gobblers, 1/2 lb.....	13 1/4 @ 14 1/4
Hens, California, 1/2 dozen.....	4 00 @ 5 00
Roosters, old.....	4 00 @ 4 50
Roosters, young (full-grown).....	4 00 @ 5 00
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 50 @ 4 00
Broilers, small.....	3 00 @ 3 50
Ducks, old, 1/2 dozen.....	3 50 @ 4 00
Ducks, young, 1/2 dozen.....	4 00 @ 5 50
Geese, 1/2 pair.....	1 50 @ 1 75
Goslings, 1/2 pair.....	1 75 @ 2 00
Pigeons, old, 1/2 dozen.....	1 25 @ 1 50
Pigeons, young.....	1 75 @ 2 00

## BUTTER.

Prices have been on the down grade, market showing generally unsettled condition. Fresh is arriving quite freely for this early date, and prospects favorable for heavy quantities coming forward in about two months. If packed butter was out of the way there would now be no trouble in moving all the fresh coming forward, but by the time stocks of packed are exhausted there will likely be more than enough fresh butter for the local demand. The development of considerable shipping trade will be necessary the coming season to keep the market in healthy condition.

Creamery, extras, 1/2 lb.....	24 @ —
Creamery, firsts.....	21 @ —
Creamery, seconds.....	20 @ —
Dairy, select.....	21 @ —
Dairy, firsts.....	19 @ —
Dairy, seconds.....	18 @ —
Mixed store.....	14 @ 15
Creamery in tubs.....	19 @ 21
Pickled Roll, 1/2 lb.....	19 @ 20
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/4

## CHEESE.

Stocks are light, especially of desirable qualities, more particularly mild new of high grade, and market is firm, with no likelihood of values receding materially for some weeks to come. In the Eastern markets there is not much choice cheese offering at present.

California, fancy Nat, new.....	12 1/4 @ 13
California, good to choice.....	11 1/4 @ 12
California, fair to good.....	11 @ 11 1/4
California, "Young Americas".....	13 @ 13 1/4

## EGGS.

There are not many fresh eggs coming forward, and buyers who will not have anything but the most select, find it necessary to pay stiff prices. The demand at extreme rates current is, however, very limited. Fresh eggs which run irregular as to size and color have to go at rather low figures. Cold storage eggs continue to be crowded to sale, both California and Eastern product, with stocks heaviest of the latter.

allifornia, select, large, white and fresh. 41 @—	
allifornia, select, irregular color & size. 35 @40	
allifornia, good to choice store.....	27½ @ 32½
allifornia, common to fair store.....	— @ —
Eastern, good to choice.....	25 @ 30
old Storage.....	22½ @ 27½

## VEGETABLES.

Onions are commanding good prices, and choice are more likely to go higher than lower as the season advances. Fresh



Peas and String Beans were in very fair request, with offerings limited, and market for choice ruled firm. Tomatoes sold at a rather wide range, with market weak for ordinary and defective qualities. Cucumbers were scarce and higher.

Beans, String, # lb.	3 1/2 @ 5
Beans, Lima, # lb.	2 1/2 @ 3 1/2
Cabbage, choice garden, # 100 lbs.	50 @ 65
Cauliflower, # dozen.	40 @ 50
Cucumbers, Bay, # large box.	1 00 @ 1 50
Egg Plant, # box.	40 @ 65
Garlic, # lb.	2 @ 2 1/2
Mushrooms, # lb.	8 @ 15
Okra, Green, # 100 lbs.	1 50 @ 2 00
Onions, Yellow Danver, # cental.	1 50 @ 2 00
Peas, Sweet garden, # lb.	4 @ 5
Peppers, Green Chile, # sack.	35 @ 50
Peppers, Bell, # box.	40 @ 65
Squash, Marrowfat, # ton.	8 00 @ 10 00
Summer Squash, Bay, # large box.	1 00 @ 1 25
Tomatoes, # large box.	30 @ 65

#### POTATOES.

There was a rather firm market for potatoes, with a fair demand, both on local account and for shipment, and offerings not particularly heavy. Values were maintained at about same range of prices as prevailed the preceding week. That the market for good to choice potatoes will develop any pronounced weakness during the balance of the season is not probable. Sweets were in ample supply for current demand, market for same presenting an easy tone.

Burbanks, Salinas, # 100 lbs.	1 30 @ 1 60
River Burbanks in sacks, # cental.	90 @ 1 10
Petaluma and Tomales Burbanks.	1 10 @ 1 30
Oregon Burbanks.	1 25 @ 1 50
River Reds.	1 30 @ 1 50
Sweets, Merced, # cental.	60 @ 70

#### The Fruit Market.

##### FRESH FRUITS.

Apples of high grade are in good request and are commanding tolerably high prices, choice to fancy 4-tier stock, such as select Spitzberg, being quotable up to \$2 per box, with some sales reported in a small way at an advance on this figure. Common qualities of Apples did not sell, however, at materially better prices than had been current for some weeks preceding. Pears were in light stock, but only choice table fruit was especially sought after or salable to decided advantage. Choice to select Winter Nelis brought good prices. Grapes were in reduced receipt and offerings of desirable quality brought better average figures than preceding week, but faulty stock had to go in the main at rather low values. Persimmons did not make much of a display, nor was the demand for them very active. Raspberries and Blackberries were on market, and sold mostly at low figures, not being a novelty and having to depend largely on peddlers for an outlet. Strawberries showed great difference in quality and went at a wide range of prices. Some were delayed in transit and when presented for sale were in unmerchantable condition.

Apples, fancy, # 4-tier box.	1 50 @ 2 00
Apples, good to choice, # 50-lb. box.	1 00 @ 1 50
Apples, common to fair, # 50-lb. box.	40 @ 75
Apples, Lady, # box.	1 00 @ 1 75
Blackberries, # chest.	6 00 @ 8 00
Figs, # 2-layer box.	— @ —
Grapes, # crate and small box.	50 @ 90
Grapes, large open boxes.	1 00 @ 1 50
Pears, Winter Nelis, # 40-lb. box.	1 25 @ 1 75
Pears, other kinds, # box.	50 @ 1 00
Persimmons, # box.	50 @ 1 00
Pomegranates, # box.	— @ —
Quinces, # box.	30 @ 50
Raspberries, # chest.	6 00 @ 8 00
Strawberries, Longworth, # chest.	9 00 @ 11 00
Strawberries, Large, # chest.	4 00 @ 6 00

##### DRIED FRUITS.

In the market for cured and evaporated fruits there has been the past week a fair amount of trade in the way of transfers from second hands, at values quotably the same as previously noted, but beyond this there was very little done. There is not much opportunity for wholesale trading, however, as stocks other than Prunes and Apples are now practically out of first hands. Apples continue firm, with movement hardly so active as a week or two ago, perhaps as much or more the result of limited spot offerings than of decreased inquiry, although at the extreme figures now generally demanded, buyers are naturally proceeding more cautiously than when market was more in their favor. The market for Prunes is without quotable improvement and the movement is rather slow. Buyers are bidding on the 2 1/2 @ 2 3/4 basis for the four sizes, where they are disposed to purchase, and are securing some outside Prunes on the 2 1/2 basis, mainly the larger sizes, which are more plentiful and relatively cheaper than small Prunes. New Santa Claras would doubtless move freely on the basis above named, but the Association is unwilling to meet buyers on this plane of values, deeming its present card rates sufficiently low, and there is certainly good reason for so claiming.

##### EVAPORATED OR BLEACHED.

Apricots, Royal, prime.	7 @ 7 1/2
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Apricots, Royal, choice, in sacks, # lb.	8 @ 8 1/2
Apricots, Moorpark.	10 @ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy.	8 @ 8 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.	6 @ 6 1/2
Figs, pressed.	5 1/2 @ 7
Nectarines, # lb.	5 @ 6 1/2
Peaches, unpeeled, fancy.	7 @ 7 1/2
Peaches, unpeeled, choice.	6 @ 6 1/2
Peaches, peeled, in boxes.	12 @ 14
Pears, halves, choice to fancy.	6 @ 8 1/2
Plums, Red and Black, pitted.	5 @ 6
Plums, White and Yellow.	5 @ 6
Prunes, 4 sizes, in bags, 2 1/2 @ 3c; 50-60s, 3 1/2 @ 4c; 60-70s, 3 1/2 @ 3 1/4c; 70-80s, 2 1/2 @ 3c; 80-90s, 2 1/2 @ 2 1/4c; 110s and less, 1 1/2 @ 2c; these figures for 1901 crop.	

##### COMMON SUN-DRIED.

Apricots.	6 @ 6 1/2
Apples, sliced.	3 @ 5
Apples, quartered.	3 1/2 @ 4 1/2
Figs, Black.	2 1/2 @ 3 1/2
Figs, White.	3 @ 3 1/2
Peaches, unpeeled.	5 @ 6
Pears, prime halves.	5 @ 6
Plums, unpitted, # lb.	1 1/2 @ 2 1/2

##### RAISINS.

Movement in Raisins is of fair volume for this date, especially when the quite limited quantities now remaining unplaced are taken into consideration. Prices are without improvement. In fact, seeded Muscatels, two and three-crown, are going at slightly lower figures than were current early in the month.

Following are the prices for new crop, as fixed by the Fresno Association:

Loose Muscatels—	Per lb.
4-crown.	4 1/2
3-crown.	4 1/2
2-crown.	3 1/2
Seedless Muscatels.	4 1/2
Seedless Sultanias.	5
Thompson's Seedless.	6
Bleached Thompson's—	
Extra Fancy.	—
Fancy.	10
Choice.	9
Standard.	—
Prime.	—
Seeded—	
3-crown, 1-lb carton.	6
2-crown, 1-lb carton.	5 1/2
London Layers, 20-lb boxes—	
2-crown.	1 10
3-crown.	1 20
4-crown.	—

##### CITRUS FRUITS.

Oranges are in good supply, but are not sufficiently well colored or sweet enough to be desirable, and are consequently moving slowly at a lower range of prices than last quoted. Lemons are offering at unchanged figures, but are not meeting with brisk custom, and market is by no means firm. Limes are plentiful and are going at low prices.

Oranges—Navels, # box.	1 50 @ 2 50
Seedlings, # box.	1 00 @ 1 50
Tangerines, # 1/2 box.	1 00 @ 1 25
Lemons—California, select, # box.	2 50 @ —
California, good to choice.	1 75 @ 2 25
California, common to fair.	1 00 @ 1 50
Grape Fruit, # box.	1 25 @ 2 25
Limes—Mexican, # box.	4 00 @ 4 50

##### NUTS.

Almonds are ruling fairly steady, with few now remaining in first hands and prospects favorable for an early clean-up. Walnuts are moving into consuming channels about as rapidly as could be expected, and at generally unchanged values. Peanut market is quiet but steady.

California Almonds, shelled.	17 @ 20
California Almonds, paper shell, # lb.	10 1/2 @ 12
California Almonds, soft shell.	7 1/2 @ 9
California Almonds, hard shell.	5 @ 6
Cal. White Walnuts, No. 1 soft shell.	9 @ 9 1/2
Cal. White Walnuts, No. 2 soft shell.	7 @ 7 1/2
Cal. White Walnuts, No. 1 hard shell.	8 1/2 @ 9
Cal. White Walnuts, No. 2 hard shell.	6 1/2 @ 7
Cal. Chestnuts.	7 @ 10
Peanuts, California, fair to prime.	4 1/2 @ 5 1/2
Peanuts, Eastern, hand-picked.	5 1/2 @ 6
Pine Nuts.	5 @ 6

##### WINE.

The wholesale market for wine remains inactive, with stocks of old practically out of first hands, so far as wholesale offerings are concerned, and it is too early for business in this year's vintage, there being too much sediment in new wine at this date for dealers to take hold. In about sixty days most of the new wine will be sufficiently settled to be drawn off, and prospects are that when the crop is ready for market there will be no trouble

in securing buyers at comparatively good figures. Quotable wholesale values for last year's dry wines are nominally 25 @ 30c per gallon, with some selections salable at a higher range of prices. The market for this season's dry wines is not apt to open at a lower range than 20 @ 25c per gallon for good to choice.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks.	57,500	2,691,211
Wheat, centals.	365,325	3,107,399
Barley, centals.	240,674	3,733,258
Oats, centals.	22,406	540,349
Corn, centals.	3,100	31,533
Rye, centals.	950	51,758
Beans, sacks.	48,361	456,962
Potatoes, sacks.	48,569	623,936
Onions, sacks.	3,296	129,134
Hay, tons.	2,670	68,196
Wool, bales.	914	38,158
Hops, bales.	121	5,025

#### EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, # sacks.	73,320	2,016,258
Wheat, centals.	321,623	2,676,028
Barley, centals.	88,125	2,800,062
Oats, centals.	2	2,119
Corn, centals.	50	8,063
Beans, sacks.	16	16,420
Hay, bales.	—	4,940
Wool, pounds.	—	511,316
Hops, pounds.	1,554	268,320
Honey, cases.	45	4,467
Potatoes, pack's.	308	18,494

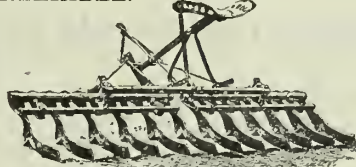
#### New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

##### FOR THE WEEK ENDING NOVEMBER 12, 1901.

686,380.—PRINTING PRESS—J. F. Ames, Portland, Or.
686,438.—ALARM WHISTLE—Bowen, Barnett & Newnham, Los Angeles, Cal.
686,441.—CAPSTAN—T. G. Cantrell, S. F.
686,385.—STEAM MANGLE—Casper & Gerder, Sacramento, Cal.
686,298.—SHAVED ICE PERFORATOR—E. G. De Ry, Seattle, Wash.
686,447.—FLY TRAP—F. W. J. & W. Fritsch, Sedro Woolley, Wash.
686,281.—STOMACH PUMP—W. Gerry, Ventura, Cal.
686,691.—WELL CASING PERFORATOR—E. A. Hardison, Los Angeles, Cal.
686,298.—WHEELBARROW—O. Hoffmann, Portland, Or.
686,657.—MATCH BOXES—J. W. C. James, Portland, Or.
686,521.—OILING CABLES—C. Larsen, Crockett, Cal.
686,314.—BOOT DRIER—H. C. Mansfield, Chico, Cal.
686,417.—EASEL SUPPORT—A. B. Murray, San Rafael, Cal.
686,471.—SPEED GEAR—J. M. Ough, S. F.
686,373.—BOOK BINDING—B. F. Welker, San Miguel, Cal.

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**J. ZENTNER & CO.,**  
General Commission Merchants,  
Wholesale Dealers in GREEN AND DRIED FRUITS, POTATOES, ONIONS, BEANS, WOOL, BUTTER, EGGS, ETC.

**TURKEYS WANTED.** POULTRY AND GAME a Specialty.  
CONSIGNMENTS SOLICITED.  
N. E. CORNER WASHINGTON AND FRONT STS., SAN FRANCISCO, CAL.

Telephone, MAIN 649.

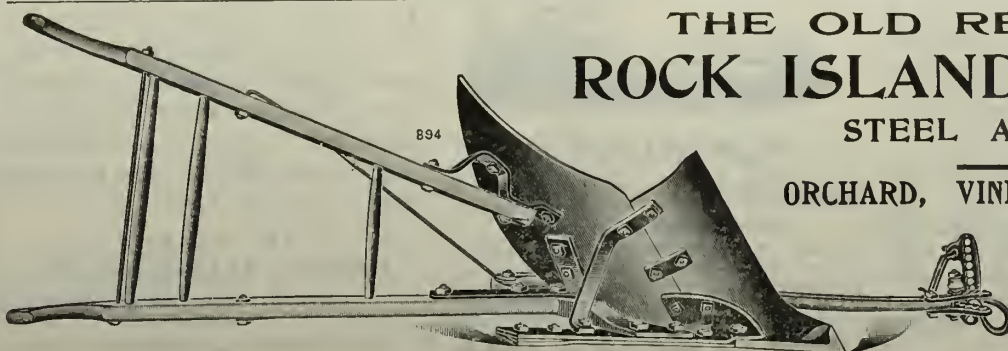
**SHERRY & CO.,**  
GENERAL COMMISSION MERCHANTS, AND WHOLESALE DEALERS IN  
BUTTER, CHEESE, EGGS, NUTS, HONEY, POULTRY, POTATOES, DRIED FRUITS, BEANS, ONIONS, HIDES, and all kinds of Farm and Dairy Produce.  
Consignments Solicited. Highest Net Price. Remittances Made at Once.  
**Turkeys Wanted.** 305-307 Front St., San Francisco.

## THE OLD RELIABLE ROCK ISLAND PLOWS.

STEEL AND CHILLED  
FOR  
ORCHARD, VINEYARD AND FIELD.

Best Plows.  
Lowest Prices.  
WRITE OR CALL.

ALLISON, NEFF & CO.,  
222 Mission St., San Francisco.



#### California Dried Fruit at New York.

NEW YORK, Nov. 26.—Evaporated apples, common, 6 @ 8 1/4c; prime wire tray, 9 @ 9 1/4c; choice, 9 1/2 @ 9 3/4c; fancy, 10 @ 10 1/2c.  
California Dried Fruits.—Business doing is light, but at generally unchanged values.  
Prunes, 3 1/2 @ 7c.  
Apricots, Royal, 8 1/2 @ 13c; Moorpark, 9 @ 13c.  
Peaches, unpeeled, 6 @ 9 1/4c; peeled, 11 @ 15c.

## Demand P & B Building Paper

Solicitors may try to talk you out of using P & B building paper—may tell you that other building papers are better—may tell you that other building papers are cheaper.

They do not tell you the truth, for there is no building paper that is better and the best building paper you can buy is the cheapest building paper for your building, for it will last longer and give you better service.

For 16 years P & B building paper has been giving builders the service they demand—it will give you the same service.

Send for booklet, it's free.

## Paraffine Paint Co.

116 Battery Street, S. F., Cal.

## FRANK DALTON CO.,

Shipping and Commission Merchants.

—DEALERS IN—

BEANS, POTATOES, GRAIN, DRIED FRUITS, DECIDUOUS AND CITRUS FRUITS.

Car Lots a Specialty. Send Samples.  
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## SAVE \$10.- PER COW

EVERY YEAR OF USE.

### DE LAVAL CREAM SEPARATORS.

Prices \$50.- TO \$800.-

"Alpha" and "Baby" styles. Send for Catalogue.

THE DE LAVAL SEPARATOR CO.  
Randolph & Canal Sts., 74 Cortlandt Street,  
CHICAGO. NEW YORK.

103-105 MISSION STREET,  
SAN FRANCISCO, CAL.

### Feeding Hogs on Clean Straw.

As the wet season will soon turn common corrals into seas of mud, something should be done to promote the thrift and comfort of the hogs. An Ohio farmer tells the Breeders' Gazette how he uses plenty of clean straw. He says: I have concluded that if I ever want a permanent feeding platform for hogs it will be a cement floor. In the meantime I will practice a plan that I have used in muddy weather for years. Some men will say that it is not practical, but do not condemn it till you have given it a trial. Just now we are having showers nearly every day, in consequence of which the lot where I feed my pigs ground barley in troughs, although well graveled, becomes filthy and the gravel gets into the troughs and when it dries during the day is very hard to get out. To avoid this condition I had a number of loads of barley straw hauled into the lot and the troughs placed on the straw. When this floor gets filthy more straw will be hauled in. Sometimes straw will get into the troughs, but it is easily cleaned out, and is not filthy like the mud. Now to carry this straw floor idea a little further, it is a much better floor for corn feeding purposes if the straw is a foot deep than 1 inch of mud. I am aware that there is a strong feeling against straw being used in connection with the growth of swine. A lot of feeding hogs fed their ear corn on clean loose straw will have clean noses and faces, clean feet and clean legs and if provided with good sleeping quarters will go to their nests clean from mud and other filth.

The hog enjoys hunting grain out of this straw feeding floor. When the straw becomes broken and unclean add more. By the use of the straw the feeding can be done at any desired point on the farm. With large feeders it will only be thought necessary to use straw when mud and snow make ground feeding wasteful and impracticable.

In my own practice I sell my spring pigs easily at about 200 pounds before severe winter weather sets in. They are usually fed on a clover sod and I seldom need resort to straw to keep them and the ear corn out of the mud. The fall pigs if kept about the lots are kept out of the mud by the use of straw.

### Mr. Murphy's Hog Protector.

P. H. Murphy of Sacramento county writes to the Record-Union as follows: "I am interested in the breeding and raising of pure-bred hogs, and have been for many years, being very successful. I never had any plague or cholera in my herd. To keep the hogs in good health I keep their pens clean. I use charcoal, wood ashes, salt, sulphur and copperas, and placed where they can have access to it freely. I give them clean, pure well water, and plenty of it. I believe that prevention is better than cure. I think there is very little success in doctoring a hog when sick. I have also used the following prescription as a preventive for hog cholera. I think it a good and cheap remedy: Wood charcoal, 1 pound; sulphur, 1 pound; sulphate sodium, 1 pound; sulphate antimony, 1 pound; chloride sodium, 1 pound; bicarbonate sodium, 2 pounds; hyposulphate sodium, 2 pounds. Pulverize and thoroughly mix. Dose: One tablespoonful for a 200-pound hog."

### How They Talk.

This way: "I like your paper, of course. Everybody likes it, and with good cause, too. It's all right." Just think of a staid and prosperous Sonoma county farmer making love to us that way. Isn't it rather bold?

### Ferrets.

Ferrets are natives of Africa, but have been domesticated and raised in confinement, and have become of great use to man for rabbit hunting, killing small animals, such as rats, ground squirrels, gophers, etc. They are about the size of a small mink, having a long, slim body, pointed nose and a small head. They can go in any place through which their head can pass. They are of two colors, viz., white and brown. The white ferret is called the English and the brown the Fitch. The white ones have pink eyes and the brown ones dark eyes. There is no difference in the two varieties as far as breeding and working is concerned, only a fancy as to color. They are a hardy and strong animal and will breed well in any climate. They are active and always want to be on the move and are natural hunters.

They will drive rabbits from under hay stacks, brush heaps, barns and out of all manner of holes and burrows. With the use of a ferret, rabbit hunting is one of the best enjoyments, as rabbits are always plenty and also very destructive to small fruit trees, etc. To hunt rats all you have to do is to liberate the ferret where they are, and the ferret will soon find them. The two animals are natural enemies, and a ferret will attack a rat as soon as it can reach it. The ferret is eager to catch them, and the rats are just as eager to make their escape. Ferrets can be liberated in houses, barns, mills, elevators, vessels or any place where rats infest, and will entirely rid them of these destructive vermin, and will come out when through hunting and be caught as easily as a cat or a dog. Any farmer who is bothered with rats and mice, with the aid of one or two ferrets, can save considerable.

Some one has estimated that rats destroy \$8,000,000 worth of property in a single year in the United States. The farmer is the greatest loser, and we believe that the use of the ferret is the only successful way of destroying the pest. A few years ago the ferret was little known; but as their usefulness has been realized, this has created such a demand for them that it has not as yet been half supplied.

There are two  
sorts of lamp chim-  
neys: mine and the  
rest of them.

MACBETH.

My name on every one.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.

MACBETH, Pittsburgh.



### On Rough Ground

use PAGE Fence. It fits any surface perfectly.  
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### MONARCH Grubber and Stump Puller.

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\$7000 WILL BUY 1747 acres substantially improved: farming implements included. An exceptional opportunity for grain and stock raising. For full particulars address H. H. MINER, Le Grand, California.

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All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of

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The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes.  
Made by STANDARD OIL CO.

## UNCLE SAM'S SEPARATOR

HAS GROWN TO SUCH LARGE PROPORTIONS THAT IT IS  
AN ELEPHANT TO THE DE LAVAL PEOPLE

The U. S. Separator is such a bugbear to them that they expect an elephant in everything connected with it, so it is not surprising to find them using an elephant to run a U. S. Separator with; neither is it surprising to see tears in the eyes of the elephant. It is enough to make an elephant weep to have to do work that a dog he could play ball with could do easily. That a dog can run a U. S. Separator will be seen by reading the following letter:

84-lb. Dog Runs No. 7 U. S. Separator Without Trouble.

MINOT, ME., Sept. 10, 1901.  
I see your competitors, the De Laval Co., are passing out circulars at fairs, showing an elephant running a dog-power, and printing the statement that it requires much power to run one of the U. S. Separators.  
Now I have run one of your No. 7 new capacity machines for more than a year, and operated the same by dog-power. My dog weighs only 84 lbs., and commenced to run the separator when he was only four months old. I have no trouble in maintaining the required speed, and am greatly pleased with the separator and power.

A. K. P. QUIMBY.

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

## FERTILIZERS!

NITRATE OF SODA supplying Nitrogen or Ammonia,  
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MURIATE and SULPHATE OF POTASH supplying Potash,  
THE THREE ESSENTIAL ELEMENTS OF PLANT FOOD.  
Can be supplied alone or mixed in any proportion to supply whatever deficiency may exist in the soil, thus paying only for what is lacking and necessary to replace.

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ALSO AT FRESNO AND LOS ANGELES.  
WRITE TO THEM FOR PAMPHLETS.

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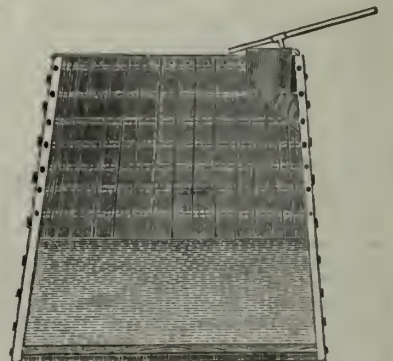
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PARIS EXPOSITION 1900.

Grown on J. West Martin Ranch,  
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IT is clean and of uniform grain.  
Has increased in gluten every planting in California. All small, light and immature end grains removed. Has been milled by Del Monte Milling Co., to whom we respectfully refer.

FOR SALE BY  
FRANK DALTON CO.,  
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— or —  
T. D. CARNEAL, Livermore, Ca'.

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Oil Tanks. Water Tanks. Wine Tanks.  
Lumber direct from the woods. THIS MEANS  
LOW PRICES.



5000 ft. of Pipe, good as new, at a bargain.  
R. F. WILSON, Stockton, Cal.  
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**BULLS**—Devone and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**JERSEYS, HOLSTEINS & DURHAMS.** Bred specially for use in Dairy. Thoroughbred Hogs, Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**PETER SAXE & SON,** Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

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**JERSEYS**—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

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**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

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**MEAT MEAL.** Best quality. Lowest price. A. Warren Robinson, Napa, Cal.

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**BERKSHIRE, POLAND-CHINA & DUKOC HOGS.** Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**POLAND-CHINA PIGS** by Sweepstakes Boar at State Fair 1901. None Better. S. P. Lindgren & Sons, Kingsburg, Fresno Co., Cal.

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**P. H. MURPHY,** Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**CHAS. ASHLEY,** Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

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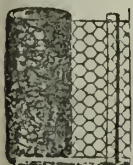
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### PIGS FOR SALE.

Nine Four-Month Registered Berkshire Pigs. \$10 EACH, OR \$75 FOR THE NINE.  
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GOODS,  
NETTING,  
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BASKETS.

West Coast Wire & Iron Works,  
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THE BEST FEED FOR STOCK,  
CHICKENS AND PIGS.

For sale in lots to suit by  
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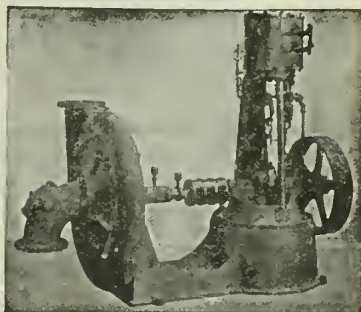


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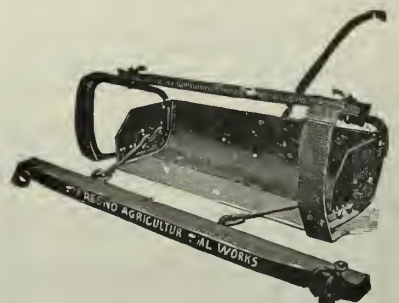
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## ENTOMOLOGICAL.

## Horticultural Commissioners' Meeting.

The eleventh annual meeting of the Staff Association of County Boards of Horticultural Commissioners will be held at Pioneer Hall, San Francisco, during the week of the Fruit Growers' Convention, beginning Monday, December 2, 1901, at 10 o'clock A. M. All County Horticultural Commissioners are ex-officio members of the Association and are expected to be present and take part in the proceedings. A cordial invitation to attend the meetings and participate in the discussions is extended to the members and officers of the State Board of Horticulture, local inspectors, fruit growers, nurserymen and others interested.

**WIDE REACHING PROPOSITIONS.**—In addition to many local questions, there will probably be discussion of matters affecting the whole country. There was held in Washington last week a general conference of the horticultural inspectors of the different States in connection with the convention of the American Association of Agricultural Colleges and Experiment Stations, and the following list of topics discussed:

1. Within what limits of time may nurseries properly be inspected, and what period should the annual certificate be made to cover?
2. What should be the usual form of certificate?
3. What should be the procedure or form of the certificate, in case some part of a nursery is infected by a dangerous fungus or insect pest not of a kind to involve other parts not so affected?
4. What should be the common policy of State inspectors with reference to stock officially inspected and certified in other States?
5. What application should be given to the term nursery stock? Should it include herbaceous plants grown out of doors? Should it even cover greenhouse stock?
6. What nursery pests should be regarded as dangerous enough to influence or prevent the granting of certificate?
7. May provision be made for the publication of a practical article on the principal pests of the country, available for all horticultural inspectors, and distributed to all others immediately interested?
8. What measures should be taken by horticultural inspectors for the regulation of dealers, not owners of nursery premises, nor growing their own stock for sale?
9. Is national legislation covering nursery inspection desirable and practicable?
10. What, in the judgment of the conference, is the best insecticide programme for orchards infested with San Jose scale, for the official entomologist charged with the destruction of the scale, and for the private owner seeking to suppress the scale or to keep it in check?
11. What insects or fungus pests of the orchard should be regarded as sufficiently dangerous to the property of others to require suppression by individuals in the general interest?
12. What is a sound public policy with respect to the division between the State and the property owner of the costs of a practical operation for the control of horticultural pests?

Discussions of all these subjects from a California point of view will probably be had at the meetings next week in this city.

## How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

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## FRUIT MARKETING.

## What has the Cured Fruit Association Done?

TO THE EDITOR:—The president of the California Cured Fruit Association is to deliver an address at the Fruit Growers' Convention which is to be held next month, and the subject of his address is to be "What the Association has Done."

Now, it is quite possible that the president may, from the depth of his presidential chair, contemplate the result of the Association's work with equanimity and even satisfaction, and may be prepared to tell us how great things have, in his opinion, been accomplished; but the unfortunate prune grower who has placed in the hands of this combine his crop of prunes for last year and this year, can hardly feel satisfied with what has been done for his benefit. He has toiled two years and received hardly anything, while outsiders and members who have disregarded their contracts with the Association have disposed of their produce.

Everyone must admit that the object for which the Association was formed has not been attained. The intention was to obtain control of a large percentage of the crop of prunes, so as to be in a position to establish and maintain fair prices for the producers. It was unable to do so last year, it has been unable to do so this year. In this respect the Association has been a failure—a hopeless failure. If this be true the sooner we admit it the better, so that we should endeavor to replace this organization with something more suited to our requirements.

EDWARD LE QUESNE.

Cupertino, Nov. 22.

This is rather prejudging the case. All who feel this way should attend the convention and take part in the discussion, in order that the full truth may be brought out.

## The Sicily Lemon Crop.

Special Consular Report Received by the Pacific Commercial Museum of San Francisco.

Consul Chas. M. Caughy of Messina, Italy, Oct. 20th, writes: "The lemon crop is in good condition. The yield will be probably one-third larger than last year. The prices for October range from 5s 9d to 6s, cost and freight to New York. Up to the present moment not a single order has been passed for November, American buyers no doubt waiting to know how the California crop develops."

There are no changes in freight rates from last year, the rate still being 1s 2d, with a drawback of a penny to the shipper at the end of the season. It is absolutely impossible to even approximate what portion of the crop will be exported to the United States. As the American production is more or less, the Sicilian exportation will naturally be less or more.

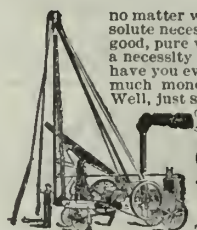


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## DIRECTIONS FOR SUCCESSFUL OLIVE PICKLING



**P**LACE olives in solution composed, 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove tartness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 6 oz. salt to gallon water for 7 days. Put in brine 10 oz. salt to gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles soaked in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

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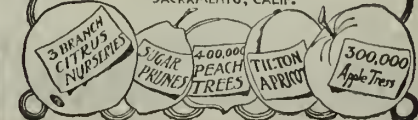
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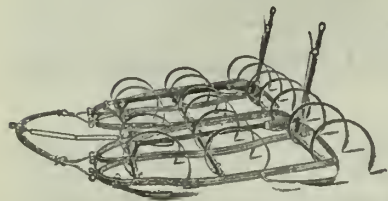
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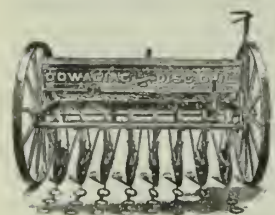
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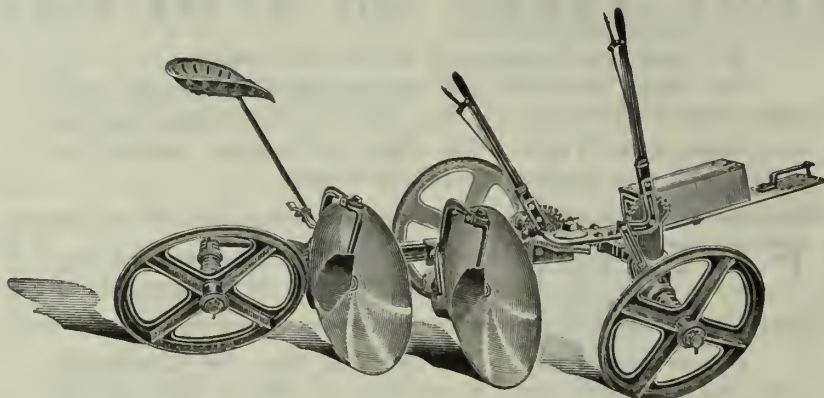
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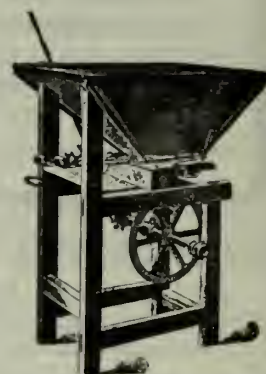
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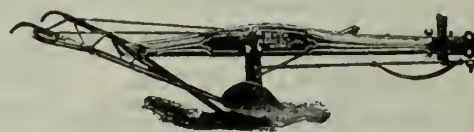
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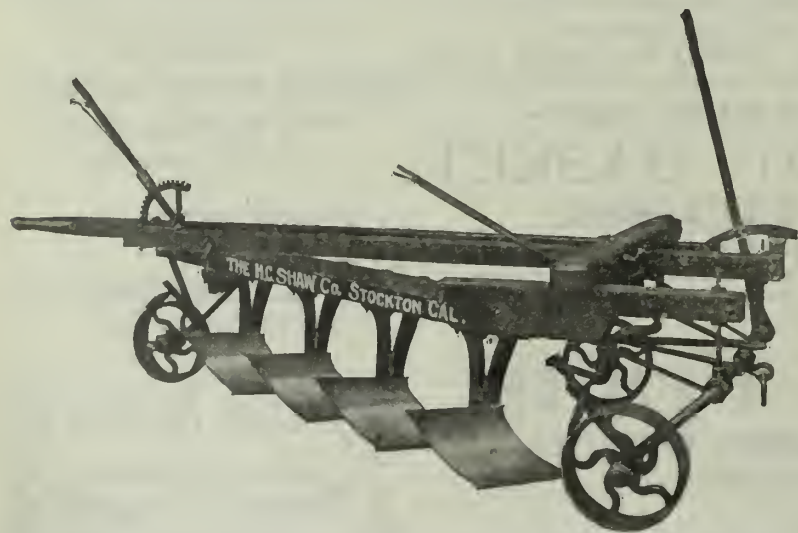
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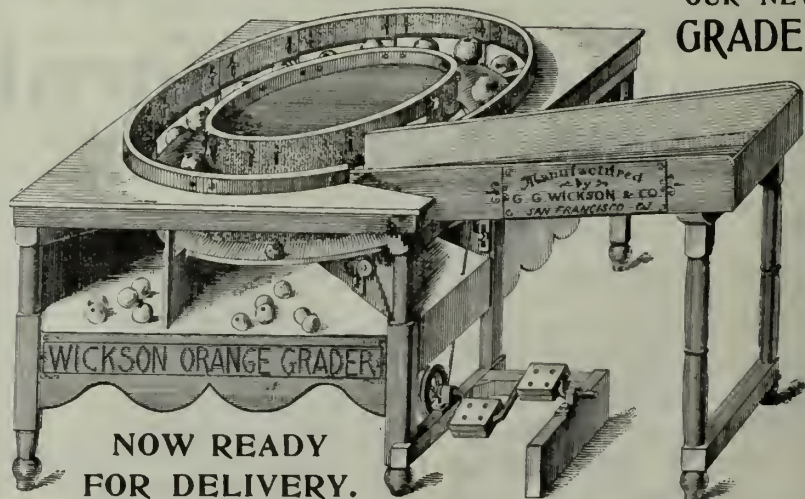
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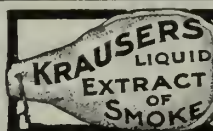
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 23.

SAN FRANCISCO, SATURDAY, DECEMBER 7, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Diversity in the San Joaquin.

We alluded recently to the infinite variety of the San Joaquin valley in agricultural lines and the panorama on this page reinforces the earlier showing. Nothing is more gratifying nor more promising of prosperity than the diversity of production which has been extending so rapidly during the last few years. Think of the vast region four decades ago little but a stock range; three decades ago, stock range and wheat field; two decades ago, the beginning of the vast fruit interests which one decade ago reached wonderful output; less than a decade ago the development of the great creamery interests and the multiplication of the alfalfa area. Now the San Joaquin, as a whole, is the best illustration of diversity in production as a cornerstone of production, except that the same idea is perhaps quite as forcibly demonstrated on a smaller scale in some of the coast counties. But the diversification of the valley, as a whole, still needs to be reduced to diversity on individual farms, as far as conditions warrant, and this is the text of the present preachment. How can the idea be better enforced than by reference to telling little scenes which are grouped herewith to suit our purpose from the systematic showing now being made of the valley by the Santa Fe Company? The first four pictures are of fruits. The olive, which comes nearer



The Olive Harvest.



Heavily Laden Prune Trees.



Where the Almond is Profitable.



The Watermelon Belt.



Dairy Stock on Valley Pasture.



Happy Flocks by Flowing Water.



Hogs in Alfalfa.



Stubble-Fed Turkey Crop.

to being satisfactory as a bearer in the San Joaquin than in many other parts of the State, is shown fruiting heavily as a low tree, as it ought to do. The same is true of the prune, with its low, spreading form, as shown in other picture. The almond, like the olive, is on its good behavior in the San Joaquin valley, especially in the Brentwood district, where Mr. O'Hara showed clearly how condemned grain land could be made into splendid almond orchards.

The other group of pictures follow live-stock lines. This is not the old range practice; it is live-stock farming, for every picture shows signs of culture. The large flock of sheep is drinking at an irrigation canal; the Holstein cows are feeding on alfalfa in an enclosed field beyond which are orchard trees as well as native oaks; the pigs are also deep in alfalfa, while the turkeys roam the stubble fields. In all these directions and many others in the animal industry the San Joaquin valley is advancing and disclosing adaptations and valleys which were not suspected a few years ago. But the process is only at its beginning. Irrigation is extending, large grain fields are being broken up into small farms, sleepy towns are waking into activity and enterprise, the new era of progress and development is on, and last, but not least, subscribers to the PACIFIC RURAL PRESS are multiplying at a most gratifying rate.



# PACIFIC RURAL PRESS.

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E. J. WICKSON..... Horticultural Editor.

San Francisco, December 7, 1901.

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## The Week.

Again there has been a generous rain northward of Tehachapi, and, sunshine following, early winter work is in order everywhere. The lengthening evenings give opportunity for mental effort and recreation, and Congress has reassembled to provide a flow of eloquence which the rural free delivery will deliver with unaccustomed speed to the firesides of the country. With the unfolding grandeur of the nation and the glowing terms which are required to characterize present greatness and future glory, there ought to be warm times on all patriotic hearthstones this winter. The report of the Secretary of Agriculture shows that the interests of the agriculturist, at least in the lines of science underlying his work, were never so broadly and deeply favored by the Government as at present, and the President, in his message to Congress, strongly approves several issues and aspects for which the West has warmly contended, and to which we hope to find opportunity for later comment. Surely things are moving rapidly nowadays.

Wheat has been upon the up-grade, improvements both on spot and options. Six full and part cargoes of wheat have gone out and four of barley, the two aggregating about 22,000 tons, valued at about \$430,000. Barley prices are steady, but futures are a little improved. Oats are firm but not active, nor are receipts large, so that sellers are favored. Corn is the same as before. Beans are a shade easier, but no change in price, except perhaps in forced sales. Limas are going a little lower than formerly held. Bran is lower and weak. Hay is quiet and unchanged. Trade is small, as weather does not favor deliveries. Beef is stationary, mutton a little higher, while hogs are lower,  $\frac{1}{2}$  c to  $\frac{1}{4}$  c, arrivals being freer both here and at the East. Butter is weak and lower and slow of sale. Cheese has been lowered by the Exchange, but there seems to be a good demand and no surplus supply. Eggs are falling—a drop of  $7\frac{1}{2}$  c on fancy during the week. Poultry has been rather quiet, and though fancy has brought full prices there has been a shading on the whole. Potatoes are slow and onions have improved—about 25c per cental. Fine apples and pears are still scarce and selling well. Oranges are lower, arrivals being free. Strictly fancy lemons are held higher, but common stock is going as before. Dried fruit is doing fairly in a jobbing way. In prunes very large sales have been made—in fact it is supposed that the old stock of the Prune Association has been closed out. This year's prunes are more stiffly held, but buyers do not readily respond to advance. Honey shipments to Europe are about 365 cases. Hop buyers are talking 11c for choice hops. The wool market is quiet.

## The Fruit Growers' Convention.

The twenty-sixth general convention of California fruit growers assembled promptly in this city on Tuesday morning. As anticipated, the meeting from the start was spirited, the attendance was ample, the arrangements for the meeting very good, and the environment of horticultural products and appliances very interesting and appropriate. After an appropriate invocation of the divine blessing Mayor Phelan warmly welcomed the convention to the city, Prof. Wickson was chosen vice-president and the meeting was formally open. Of course, the presidency of the convention was held by Hon. Ellwood Cooper of Santa Barbara, the president of the State Board of Horticulture. For nearly twenty years he has rendered such distinguished service in promotion of fruit growing interests by his dignified and discriminating leadership of public assemblies, and by his suggestive addresses upon such occasions, that his continuance in the place of honor at the great conventions is looked forward to with general expectancy and approval. Under such favoring auspices, then, this year's convention began its work.

The opening address of President Cooper was, as usual, carefully thought out and very pointed and pertinent in his suggestions. He alluded first to the welcome fact that during the current year there had been experienced greater prosperity in the fruit industry than for years past. Citrus fruits brought better prices this year than for several years past. Walnuts were high and there was a good market for lemons, although the prices were somewhat depressed, because of excessive importations. With all the prosperity of the past year, still the fruit industry has not met with the desired measure of success, because of the conflicting opinions as to the best method of marketing. He hoped that the great problem of marketing would be determined by the shippers arriving at some decisive line of action. This hope was evidently shared by the convention, as was shown by the earnest speeches made as these matters came to be specially considered.

Another of President Cooper's forcible paragraphs was concerning the newer aspects of the insect warfare. In spite of the great efficiency of spraying materials and machinery, he held that still the fruit pests are costing the growers \$300,000 a year. He strongly urged that the State should make regular and continuous appropriations to secure their extermination by means of their natural enemies. During the past thirteen years but \$15,000 had been expended by the State in this direction, yet millions had thereby been saved to the growers. The experts whom California has occasionally employed, and who have made such strikingly valuable importations of beneficial insects, have been taken from our service by other governments, which paid them high salaries. We have only worked intermittently and under disadvantages pertaining to this fact. There should be an established policy of the State to advance this work liberally in the interests of the fruit growers.

President Cooper also made forcible allusions to other matters which he included in his final summary of recommendations as follows:

First—That we request an appropriation of \$10,000 from the next Legislature to be expended in securing parasites destructive to insect pests.

Second—That we work for improvement of our fruit quarantine laws.

Third—That we urge amending and improving the pure-food laws.

Fourth—That growers unite to secure the removal of the obelisk, "Cleopatra's Needle," to Golden Gate Park.

Fifth—That we send a commission and an exhibit to St. Louis in 1903.

The importance of the above suggestions appears on their statement—except, perhaps, that relating to Cleopatra's needle. Last year Mr. Cooper called attention to the fact that this fruit of an extinct civilization should be rescued from the cruel New York climate where it is rapidly disintegrating, and will ere long be destroyed. To bring it to the delightful bright, dry air of California, would be to restore it to climatic conditions like those which have for thousands of years maintained it and preserve the valuable relic for the contemplation of future generations. The same act would be a demonstra-

tion to the world of the characters of the California climate. As the authorities of San Francisco, to whom the project was commended by last year's convention, have done nothing, Mr. Cooper suggested that other California cities be urged to take it up.

The present confident and hopeful condition of California fruit interests, as a whole, is exhibited in the very atmosphere of the convention, and it should be a stimulus to further effort to plant wisely in the right soils and locations and to make more determined effort to triumph over difficulties in marketing which can be done by properly acting upon the community of interest, which should be recognized and acted upon by the growers. A very definite statement made at the convention was included in the report of Col. H. Weinstock of the Fruit Growers' and Shippers' Association, and we have no doubt that those contemplating fruit planting will be cheered by it. The following are the most significant points in Col. Weinstock's report:

Cherries.—The crop of cherries during the past season in California was very light, there being less than half as many carloads sent East during the season just closed than in that of one year ago. The quality of the fruit was generally good—in fact, superior to that of the preceding season—and excellent prices were realized.

Peaches.—California had a very good crop of peaches, as is evidenced in the fact that over 500 more carloads were sent East during the last season than in that preceding it. While early peaches realized fine prices, not until the latter part of August, when a tremendous crop of Eastern peaches was marketed, did a "slump" occur. With the exception of Salways and a few of the later varieties, splendid prices prevailed on peaches, netting very satisfactory returns.

Plums and Prunes.—A fair to light crop of plums and prunes only was harvested, the output of these being nearly 20% less than the preceding year. Owing to the marvelous fine prices ruling on California plums and prunes during the entire season, it is safe to say that very nearly everything obtainable under this head was shipped East, with satisfactory results.

Pears.—The pear crop of the State was an average one, although the records show a falling off of about 600 cars as compared with the shipments of last year, the crop of which, however, was unusually large. The prices obtained for good pears were particularly satisfactory, there being no "slump" or weakness in the Bartlett pear market at any time during the season.

Grapes.—The State produced an average crop of grapes. The shipping records will show an increase of over 150 cars for Eastern shipment. This, however, is not due to a larger crop, but more directly to climatic conditions, the weather during the closing days of the season being particularly favorable for grape shipments, permitting growers to move nearly their entire crop—as one grower expressed it, "Shipping everything down to the roots." The prices on grapes were also good.

Apples.—A large crop of apples was produced, which has been going forward for some time, and is still actively rolling. Owing to a light Eastern crop the demand from that section has been brisk. The entire apple crop of the State will be moved at very satisfactory prices, and in advance of previous seasons. Over 1000 carloads will go forward from the Watsonville section alone during the present season, showing an increase of 100% over last year's shipments.

There is room for further development of markets for California fresh fruits. This matter, however, rests largely with the transportation companies. If they will deliver to Chicago in six days, and to Atlantic points in nine or ten days, it will insure the arrival of fruit in a condition to permit of its reshipment in less than carload lots to minor points. The fruit must, therefore, be consumed at the point of arrival, thus limiting the possibilities for developing newer and smaller markets. This fact should be brought to the attention of the railroad authorities, in the hope that they will make every effort to give the necessary service needed to secure the broadest results for the sale of California fresh fruits.

On the whole, this has been one of the most favorable years in the history of the California fruit industry. The results cannot but have added very much to the value of California fruit lands, and to have inspired the fruit growers with more courage and hope in the future.

With the growing experience and higher judgment that is being exercised on the part of the grower in the planting, cultivating, harvesting, packing and the marketing of his crop, the outlook was never brighter for the future of the California green fruit industry.

Further contributions to the spirit of optimism were made in the essays of Mr. I. H. Thomas on the "Fruit Outlook of the San Joaquin," and by Judge W. H. Aiken of Santa Cruz on the "Outlook for the



Prune Industry." Both these essays were very hopeful and will soon find place in our columns.

The discussions in the convention on the subject of co-operative marketing were very spirited and pointed. The leader was Mr. A. H. Naftzger, president of the Southern California Fruit Exchange, who drew very important lessons from the success of the organization which he represents. Mr. Isador Jacobs of San Francisco followed a similar line—both speakers insisting that nothing short of aggressive work on the part of producers to sell fruit by their own agents and to push them into all avenues of consumption which can be possibly opened, would meet the present condition of the output or make way for its increase. These matters we shall have to take up in fuller detail at a later time. The convention was clearly in strong support of the views expressed.

QUERIES AND REPLIES.

Better Irrigation Facilities Needed.

TO THE EDITOR:—Thank you for your suggestions in answer to my previous question (see PACIFIC RURAL PRESS, November 2) regarding the condition of some of my fruit trees. The cracking open was due to drought, as you said. Since the rains those partly affected have come on nicely. I bought this orchard last spring, consisting of trees of all ages, from one year up to ten years. But they are mostly young. There was trouble about irrigation. Other fruit growers said it would not kill the trees to go without water this year. It would merely be a loss of a year's growth. The trees had had a scant supply of water for the last year or two, and considering that some orchards are grown without irrigation, depending entirely on cultivation, I resolved to try cultivating my orchard well without irrigation. If the same plan were carried out for next year, what do you think would be the result? If I intended to give up irrigating, would it be better to slacken the water supply gradually or otherwise? Would not the trees be benefited by spraying? What kind of a spray should I use and when? I find on reading your book on California fruits a reference to water wheels. Can you give me some suggestions with regard to getting mine in working order? The supply ditch is about 100 feet below the land. There has been a wheel in the ditch for the purpose of working a force pump. The water is in this way forced through piping into a raised tank. The trouble has been that the water, being constantly very muddy, wears out the leathers in the pump very fast, so that they need to be renewed every few days, and the pumping is not fast enough, so we do not get our share of water. It seems that the wheel should be larger. Do you know of any pump without leathers that could be used in such a place, and what sized wheel would be required?—ORCHARDIST, Auburn.

We are inclined to think that you will not find your fruit trees satisfactory unless you secure a better irrigation supply. Even if the trees should make fair growth when not in fruit, the extra draft upon the moisture in the maturing of the crop of fruit would bring the trees into distress, so that they could not prepare satisfactory fruit buds for the following year, even if greater injury were not done. Whether they need spraying or not depends on whether they are infested with any sort of insect or fungus which is injuring them. This can only be told by examination. The water wheels mentioned in the irrigation chapter in "California Fruits" are not wheels to run pumps, but wheels to lift water and pour it out into the flume leading to the place where it is to be used. Of course, this can only be done when the water is to be given only a short lift. To lift water in any adequate supply 100 feet, you will need better pumping arrangements than you mention in your letter. There are pumps with metal valves which would be more durable than leathers. One way to ascertain what you want would be to make inquiry in your neighborhood about the mechanics who are well informed in pump rigging, and then consult them as to what you should do and the best appliances to use. It is impossible to advise you merely on the basis of such description as you could give in a letter.

Swellings on Quince Leaf Stems.

TO THE EDITOR:—I send you a twig from a pine-apple quince tree. Can you tell me what the curious excrescences are at the base of the leaves? Is it some freak of nature or has some insect been responsible? The tree is otherwise vigorous, and this year bore for the first time several magnificent quinces. Another peculiarity of this Burbank quince was the appearance last spring of several singular

clusters composed of flower petals and green leaves. Is this a characteristic of this variety? Have taken the PACIFIC RURAL PRESS continuously since the early '70s, and would feel lost without it.—G. E. D., Napa.

The swelling of the leaf stalks sent are not uncommon. It may be due to a superabundance of elaborated sap, which seems to go to the leaves when there is not enough fruit to take it up. The little protuberances have the same flavor as the fruit, and when they grow large have the same color and odor. It is evidently not a disease. It is usually found on young, thrifty trees. The abnormal blossom which includes petals is also a result of excessive vegetative vigor. It appears on rose bushes and other plants, but seldom abundantly enough to cause complaint.

Empty Walnuts.

TO THE EDITOR:—I send a half dozen English walnuts. Will you please write and tell me why the nuts did not fill out? The tree is large, fine and thrifty, and has the same care as the others in the row. It has borne well for two years, but the nuts are all like the sample I send you.—READER, Riverside county.

We do not find any indication of disease which might account for the failure of the kernel to develop. If other trees develop good kernels under the same conditions that this one fails, it is in all probability due to some peculiarity in the growth habit of the variety. This occurs occasionally and there is no remedy for it. The proper thing to do would be to graft over the tree with scions from another tree which you find to be satisfactory.

Value of Chicken Manure.

TO THE EDITOR:—I have been told that chicken manure, if free from ashes and other foreign matter, sells for \$30 per barrel. I am positive that this is an error, for if it were true it would pay better to raise chickens for their manure than for their eggs. Will you please state in your columns whether chicken manure has any value at all, and, if so, what? Also whether there is any market for it in California?—A SUBSCRIBER, Sunol Glen, Cal.

The estimate of value given is a ridiculous exaggeration. Analyses show that fresh hen manure is sometimes worth \$4.50 per ton. Dried, it is worth more, because of the evaporation of a worthless weight of moisture. It is comparable in value with sheep manure, which, when air dry, has risen to a value of \$14 per ton, though an average valuation would be nearer \$10. All animal manures vary in value according to the feeding of the animals and the care given the manure to prevent losses by leaching or fermentation. There is a market in the fruit growing and gardening districts for all good manures, but the customer has to be personally sought for.

Peculiar Markings on Apples and Pears.

TO THE EDITOR:—I send you some apples and pears which have some peculiar light brown markings on the skin. Sometimes they are patches, but often the marking forms a regular ring around the fruit; sometimes near one end: sometimes like a belt around the center. When the pears are dried the mark remains a brown color while the rest of the skin becomes translucent. What is the cause of it?—GROWER, Anderson.

It is impossible at this time to find any agency which would accomplish the disfigurement of the fruit. In order to detect the cause of the trouble observation must be made earlier in the season, and it might then be possible to determine whether the injury comes from frost, which on some accounts seems a likely cause of the trouble, or whether it may be due to some other agency, which might then be discovered. If you should maintain interest enough in the subject to watch the apples and pears early in their growth, and could send us specimens which seem to be going this way, we will make a careful effort to demonstrate the cause of the trouble.

Apples on Pear Stock.

TO THE EDITOR:—I have six Winter Nelis pear trees, about ten years old, which I wish to graft over into apples and crabs. Would it be practicable to graft in the limbs about 6 or 8 feet from the ground, using limbs about 2 to 2½ inches in diameter?—L. G. D. S., Sonoma county.

It has been amply demonstrated by experience that apple grafts on pear stock are not permanently satisfactory, though they may grow for a time and even bear fruit in some cases. We, therefore, do not

advise you to do the work proposed as a commercial venture. If you do wish to experiment, however, set the grafts in the smaller limbs, as you describe, and not in larger wood.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending December 2, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

The temperature has been above normal during the week. Heavy rain has fallen in all parts of the valley, in some places amounting to over 2 inches. Conditions have been favorable for grass and early sown grain, but the heavy rainfall retarded farm work in some sections. Plowing and grain sowing will be resumed in a few days if fair weather prevails. Early sown grain is growing rapidly, and was never in better condition at this date. Green feed has made rapid growth and is abundant in all sections. Stock are in excellent condition. Orchards have been greatly benefited by the rain. Orange picking and shipping are in progress.

COAST AND BAY SECTIONS.

Unusually warm weather has prevailed in all sections, accompanied by heavy fogs and rain toward the close of the week. The rainfall in the central and northern districts has been heavy, some places reporting nearly 3 inches, and retarded farm work. In the southern counties the precipitation was considerably lighter, but sufficient to soften the soil for cultivation, and plowing will soon be resumed in all places. Early sown grain is in excellent condition and growing rapidly. Green feed is unusually abundant and stock are in good condition. Alfalfa is reported 10 inches high in the vicinity of Peachland. Lettuce and young onions are being marketed. Tree planting is progressing and orchards are in good condition. Orange shipments continue.

SAN JOAQUIN VALLEY.

The weather during the week has been generally warm and cloudy through the day, with cool nights and heavy fogs. Rain has fallen through the valley, greatly benefiting growing crops and softening the soil for cultivation. Early sown grain continues in excellent condition and green feed is abundant. The wheat acreage will probably be considerably greater than that of last year. Plowing and seeding are progressing rapidly. Vineyard work has been delayed by continued warm weather. Orchards are in good condition. Orange picking is nearly completed; the yield and quality are very good. The orange groves in the vicinity of Reedley will be increased during the coming season.

SOUTHERN CALIFORNIA.

The weather during the past week has been generally clear and warm, with unusually heavy fogs at night along the coast. No rain has fallen, but the heavy fogs have been of considerable benefit to vegetation and have saved irrigation water. Plowing and seeding are progressing slowly, owing to lack of rain. Early sown grain is in good condition and green feed is plentiful. Potatoes are not doing well in Orange county, and blight is showing in some places. The second crop of raisin grapes in San Diego county is nearly ready for delivery to packing houses. Oranges are in good condition and prospects are good for a heavy crop. Olive picking is progressing.

LOS ANGELES SUMMARY.—Plowing and seeding continue, but the ground is getting very dry. Rain is needed to soften the soil; also for feed and early sown grain. Orange shipping is progressing; splitting continues; crop lighter than last year.

EUREKA SUMMARY.—Abnormally warm and rainy weather during the past week. Plowing, seeding and farm work are generally suspended. Feed was never better; stock are in excellent condition.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, December 4, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall to Same Date Last Year.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....	1.82	13.03	15.41	10.92	70	46
Red Bluff.....	3.43	9.07	6.74	5.72	66	48
Sacramento.....	1.90	5.89	6.34	4.12	66	44
San Francisco.....	1.14	5.32	5.85	6.11	64	50
Fresno.....	.40	2.09	5.10	5.03	76	46
Independence.....	.25	1.34	2.10	1.83	66	34
San Luis Obispo.....	.50	4.44	9.91	3.56	74	46
Los Angeles.....	.00	2.44	6.79	2.72	84	44
San Diego.....	.00	.75	1.73	1.46	74	52
Yuma.....	.00	.22	.02	1.32	86	44

Contributions Acknowledged.

The PACIFIC RURAL PRESS desires to acknowledge the receipt of the following contributions to the relief of the widow whose situation was so pathetically described in the article "The White Slave" on page 334 of our issue of Nov. 23:

A. Block, Santa Clara.....\$10  
Cash, Menlo Park..... 2  
John J. Booth, Haywards..... 5



## THE VINEYARD.

### The Santa Clara Vine Disease, and Other Matters.

TO THE EDITOR:—I was glad to see in your last issue the report of Professors Bioletti and Twilight on the dying vineyards of Santa Clara valley, as they fully confirm, as your readers will recollect, what I surmised six months ago was the cause, namely, starvation, brought on by different causes, which I will shortly recapitulate.

1. Poor and slovenly preparation of soil and poor planting.
2. Phylloxera, which has existed there for twenty-five years.
3. Excessive cropping during several years.
4. Neglect of cultivation during the years of low prices.
5. No returns, always taking from the vines, and not giving to them.
6. Three years of drought, after heavy crops.
7. Excessive and injudicious pruning.

Can we be surprised, with all these causes combined, that even the noble grape, the most responsive of all plants to good treatment, should at last give up its life in despair? The coming vineyards of this State, which I believe to be the most prosperous and paying industry of the future, will have to be managed on different principles. Our grape growers will have to learn that vineyards must be planted with greater care, with better preparation of soil; that the subsoil plow is an instrument necessary on most of the soils; that they cannot always take, but must also give to the vine the elements it takes from soil and air; that resistant vines, planted on suitable soil, are the only foundation for a permanent vineyard; and that deep rooting vines can only bring about this result, but that they all need good cultivation throughout the summer to retain moisture. This applies to all sections of the State, not alone to Santa Clara, and seems to me the only true basis on which the industry can become what it is destined to be.

These are the lessons of a life long experience in practical viticulture, and I am glad, indeed, that the learned professors have so fully confirmed them. I am also pleased to see that the Herbemont was found by them among the most resistant to all these evils, as I introduced it twenty years ago, and it has held its own, not only as a good stock, but also a producer of abundant crops of good grapes for white wine, which some are planting for direct fruiting even now. That we have much to learn in adaptation of varieties and stocks to soil and climate is apparent to every one. That we can learn much from French experts we also know; but while it may guide us in the right path we must also follow home experience for practical results.

EARLY OR LATE PRUNING OF VINES.—I find a query in your columns about this. That vines can be pruned safely as soon as the leaves have fallen; and that the cuttings taken from them, if well taken care of, are better than those taken late, is a well demonstrated fact. Late pruning has been advocated as a preventive of frost, but that the vines lose a great deal of vitality by late bleeding is also well established. For years I have followed a medium course with good results. I prune before January, when the sap is dormant, but prune longer than is generally done in this State. Instead of spurs of two buds I prune to four or five. If the upper buds start out first, as they generally do, and are hurt by frost, pull off the frozen shoots, and the reserve buds, as well as those from the lower buds, will bring a full crop, and not exhaust the vine as much as the bleeding from pruning. Let your correspondent try this and report results.

ABOUT VINE TIES.—In your last issue I noted two questions, one "Plants for Vine Tying," the other "Phylloxera in Fresno," which I think I can answer to the satisfaction of your readers. The dry leaves of the dragon tree (*Dracaena insignis*) are the best material that I know of for tying grape vines. We have used it the last ten years in our vineyard. I have called attention to it repeatedly, but to no avail. These leaves can be easily gathered in almost any community, as the tree is a favorite for ornamental planting, and the owners are generally glad to get rid of the leaves. Soak them in hot water and then tear them into strips, about five from one leaf, and they will be found more pliable, better material and more durable than anything else. They are preferable to grape twine or any other material I know of. Phormium tenax (New Zealand flax) is good, but it does not grow anywhere except in swampy locations, and it takes time to establish it, while the *Dracaena* can be had for nothing in almost any settlement.

DIRECT PRODUCERS.—The next question, "Have we any resistant vines which are direct bearers?" I can answer with an emphatic "Yes." The Lenoir is a direct producer of a valuable red wine grape, deep in color, and of good quality, but especially for blending with other grapes to give the wine color is it valuable. Twenty years of trial have established its claim as a good, healthy grower and an abundant bearer, and old vines of twenty years' standing look as if they would stand twenty years more. This is

home experience, and while French authorities rate its resistance as low as twelve in a probable twenty, how do we know that it may not be much higher here? It certainly promises it.

The Herbemont is another variety, mentioned above—an abundant bearer of good-sized bunches for the first crop, and a heavy second crop following. It makes a fine white wine of first pressing, and the remainder can be used for red wine. Both have stood the test of twenty years, are resistant enough for me, and will, I hope, prove so when I am buried beneath California soil.

Let us profit from French experience all we can, but do not let us forget that our soil and climate may require and need different varieties. We can follow in their footsteps, but we have our own path to hew out.

GEORGE HUSMANN.

Napa.

## THE FIELD.

### Smooth Talkers and Foolish Hearers.

TO THE EDITOR:—I find in the PACIFIC RURAL PRESS of Nov. 23 a story called "The White Slave." No doubt every humane, thinking reader must be impressed by the amount of suffering depicted in that struggle for life, ending in a premature death, and the charitably inclined may even take an active interest in it for the sake of the wife and children; but, apart from that, one cannot help reaching the following conclusions:

EXTORTIONATE LAND PRICES.—The man was foolish. It was not because he was bunced in buying land worth, perhaps, \$10 or \$15 an acre for \$80. Coming from Nebraska, of course he knew nothing about California land prices, local conditions or possibilities. But he was foolish because, after living four or five years on his land, he did not realize that he was a slave and should abandon everything in order to become free. If he was, as "Eliza" says, a stronger and more zealously active man than usual, he could have found steady employment at good wages easily enough. Evidently he let his sentiment get the better of his brains by cherishing illusions about the future value of his home which were bound to vanish in air, and resulted in suicide.

A WIDE WARNING.—Secondly, is there not in the death knell of that poor, foolish man a sound of warning which should reverberate through the whole of our glorious State from north to south? A real estate boom may bring a fortune to a few; but, as a rule, the reaction cripples a community for a decade. No permanent, healthy growth can result from inflated values, and, consequently, any attempt to hold and sell land at fancy prices is a detriment for the present and a danger for the future welfare of the surrounding country. It is said that California is attracting many settlers from the Eastern States, and that the low transportation rates for colonists induce thousands to come and investigate our opportunities. I consider it a public duty for boards of trade, our agricultural press in general, and local papers in particular, to furnish constantly straight and sound advice; to state, without regard of present gain and private interests, what may and may not be reasonably expected; to explain when credit is a blessing and where it becomes a curse; to point out the danger of installment plans, life insurance and the like in connection with land buying and orchard planting. Are these not a delusion and a snare, carrying in their train, nine times out of ten, inflated values and usurious interest on the one hand, physical and mental exhaustion and financial ruin on the other?

WHAT IS LAND WORTH?—The white slave bought land for \$80 per acre. Let us take it for granted that the interest charged was seemingly low, say, 6%. That belongs to the system. What was the actual value of that land, situated in a mountain wilderness, without roads, and infested with vermin of all kinds, preying on crops and poultry, as birds, squirrels, rabbits, wildcats, etc.? I mean actual value, relative to its actual yearly production. Would not any man do pretty well if during the first three years he made his living and nothing more? And if he saved \$100 the fourth year, would not that be considered pretty good also? That is \$2 per acre in four years. Surely, he was charged ten times that amount, and could any farmer undertake to pay such interest, even under the best possible conditions, instead of the worst, and not fail?

WHAT IS THE DISTANT EFFECT?—Now look at the results. Locally, worn out land and worn out people, abandoned houses and barns, dilapidated fences. And abroad? Is the part of Nebraska where live the relatives of the white slave going to furnish any new settlers for California? About twelve years ago a colonization scheme brought a hundred families from my native country to one of the middle counties of the State. They had purchased 10 to 40-acre tracts—to be planted to raisin vines and fruit trees—at \$160 per acre! The land proved only good for wheat, sheep raising or alfalfa on a large scale, and was worth, perhaps, \$30 or \$40 per acre. In less than five years the immigrants had lost practically all

the money, labor and time invested, and for the next twenty-five years the name California will be an offense in the ears of thousands of people at home.

Aptos.

WILLEKES MACDONALD.

This is a sharp arraignment, but it is needed. Too much has been done in boom schemes and grossly exaggerated statements of land values and possible returns. Smooth talkers and foolishly credulous people who listen to them are doing the State great harm.

## HORTICULTURE.

### Importing Trees From New Zealand.

TO THE EDITOR:—In your issue of September 24 you have ably dealt with the handling of young fruit trees from New Zealand, and your sound advice to your correspondent "Resistant" agrees with our experiences in this country in importing from the northern hemisphere.

Here in New Zealand we import annually from Europe, Japan and America, and have had to face the difficulties of acclimating plants coming from opposite climatic conditions. We receive our plants in January and February, the height of the summer season and hot weather. We have never found cold storage any assistance. If we should be fortunate enough to have a shower of rain we plant out the trees as soon as received, or, failing rain, water a piece of ground and plant in nursery rows. The plants make a short season of growth and ripen off just before our midwinter. Generally speaking, they are in good, healthy condition the following spring.

Provided the plants open out from the steamer in fair condition, there is little danger of losing them when the above course is followed. The losses in importing from another hemisphere usually come from defective packing, and from the nature of some plants, which do not travel well, but with fruit trees and deciduous shrubs there is as little risk as in sending from San Francisco to New York. Pears and apples are the best—we never lose more than 10%, cherries and peaches from 10% to 15%, apricots and plums 10% to 12%. Scions travel equally well, excepting peaches, of which we often lose 50%, but apple and plum scions are a sinecure (if carefully packed) to the man who knows how to handle on arrival.

To make the most of scions (and we speak particularly of apples, pears and plums), we have found immediate budding to give best results. We receive a dormant scion in December or January, or even later. Our trees are then in full growth and sap well up. We cut the buds from the dormant scion and insert them on a strong old stock—not on sappy young seedlings. The buds "take," remain dormant till the following spring, and then make strong growth.

We send you these few hints with the desire that they may be of use to some of your readers, encourage the importation of plants that will assist your fruit growing industries, and disabuse their minds of the risks of importing and saving the life of plants.

FRANK H. LEONARD.

Auckland, New Zealand, Oct. 25.

### The Imperial Epineuse.

TO THE EDITOR:—In replying to your Winters subscriber I will state that I have tried drying Imperial Epineuse in a small way. I have tried dipping in lye, pricking, also drying in the sunshine and in the shade. Having been told that they would not stand too much heat, I filed the trays at 9 or 10 o'clock day after day, and then spread them out again late in the afternoon. All this costs money, and yet one-fourth of the prunes will contain dark cavities next the pit. This fruit, either cooked or raw, is more delicious and thin-skinned than the best French prune, yet the buyers are entirely indifferent when it is offered for sale. They don't like that bloated dark cavity. For our own use we want none other. In the Vacaville and Winters regions the Epineuse is an early prune and can be dried in advance of the French. This year my largest were profitably marketed in the East.

ORCHARDIST.

Vacaville.

## THE IRRIGATOR.

### Irrigation and Transportation.

TO THE EDITOR:—In your paper of Oct. 12, 1901, we noticed an article headed, "Irrigation in California." Now, as this is a very important subject, especially as it leads to more opening for transportation facilities as well as irrigation, let us keep the ball a rolling by everyone interested doing his part.

Irrigation is well to help divide the large tracts of land or bring it under colony control; but as we are deficient in ways to move what we already produce, we must look well to its advancement and see that



transportation facilities keep pace with the already productiveness of our country, for to open up ways of increasing the product of the soil will also open up ways for transportation if we see that part, if not all, of the main waterways are used for moving said products, or electric roads constructed for such purposes; and as co-operation means two or more working together for the same end, this would be true co-operating, the commonwealth moving the products produced by the same.

We would be pleased if you would help us to obtain a copy of the report mentioned when ready for distribution.

SAMUEL M. COPPIN.

Pleasant Grove, Sutter Co., Cal.

Applications for the report on irrigation should be made to California Senators at Washington or to the Representative in Congress for the particular district in which the applicant resides.

#### Irrigation Work by the Department of Agriculture.

Hon. James Wilson, Secretary of Agriculture, in his annual report which goes to Congress this week, devotes a great deal of space to a discussion of irrigation investigations. These have been conducted through the Office of Experiment Stations, and embrace (1) studies by irrigation laws and the social and industrial institutions of irrigated agriculture, (2) investigations of the methods by which water is conserved, distributed and used.

**TITLES TO WATER.**—In reference to the first subject the Secretary states that the character of the titles to water finally recognized will do more than all other influences combined to determine whether the Western farmers ought to be tenants or proprietors. Naturally, this makes the disposal of the water resources of the West a matter of vital importance not only to the persons directly interested, but to the county at large. Every consideration which justified the general Government in the control, the survey and disposal of public lands, applies equally to the orderly and just establishment of titles to water by public authority, either State or national. He points out the confusion and trouble and almost endless litigation frequently attending the settlement of this question, and declares it to be absolutely necessary that some simple and final method of determining and protecting rights to streams should be provided. In the meantime the conditions, as they exist in arid States, are being carefully studied by the Department.

**IMPROVED INSTRUMENTS.**—Irrigation experts of the Department have designed improved instruments for measuring water, by which registers are now furnished to irrigators at about one-half the cost of the foreign instruments.

**IRRIGATION IN HUMID REGIONS.**—Attention is directed to the growth of irrigation in the humid regions, and the remarkable fact is stated that in Louisiana more money has been expended on pumping plants in the past two years than in any arid State. By irrigation, rice growing in Louisiana and Texas has raised the price of land originally worth \$5 to \$10 per acre to \$50 and even \$100 per acre.

**LEGISLATION BY CONGRESS.**—The Secretary expresses the belief that irrigation will, in the near future, become a subject for legislation by Congress, there being important reasons why it should have the attention of that body. At the same time, he says that those best informed believe that the uncertain character of water rights can only be remedied by a larger measure of public control and the making of certain classes of irrigation structures permanently public works. These, it is urged, should not be owned by private parties, and the argument produced in favor of constructing reservoirs by act of Congress is the same which justifies setting aside forest reserves and the maintaining of a force to control them. On the other hand, the Secretary points out that an appropriation of money by Congress to construct such irrigation works will bring the country face to face with a new Government policy and will carry a larger measure of public control over the water resources of the West than has hitherto prevailed or been sanctioned by public sentiment.

**LAND LAWS AFFECTING IRRIGATION.**—He reviews the influence of land laws on irrigation development, stating that laws which control the disposal of 500,000,000 acres of arid public lands must have a vital influence upon the success of irrigated agriculture. He condemns the Desert Land Act, stating that 640 acres is more land than a man of moderate means can cultivate under irrigation. Cutting down the entries from 640 to 320 acres is an improvement, but he believes in the entire repeal of the Desert Land Act and in requiring settlers or homesteaders to cultivate as well as live on their land.

**THE GRAZING LANDS.**—Referring to the grazing lands, he says probably 400,000,000 acres of the public domain has no agricultural value except for pasturage. It is at present an open common, with no laws for its protection or disposal. He refers to the frequent conflicts of the farmers under irrigation with the range stockmen, and recommends, as a remedial and beneficial measure, the leasing of the

grazing land in such a way as not to interfere with the homesteader. The rentals, he believes, would amount in the aggregate to a large sum, which could be appropriately applied to the reclamation of the irrigable lands. He points out that such leasing is not an experiment, as it has been successfully tried, although in a limited way, in Colorado, Idaho, Montana, Nebraska, Utah and Wyoming. He winds up the discussion of this subject by presenting the following conclusions:

1. That private enterprise will have to be supplemented by public aid in the construction of certain classes of irrigation works if we are to secure the largest development of Western agriculture.

2. That reservoirs located in the channels of running streams should be public works.

3. That the first step toward national aid for irrigation should be the passage of enlightened codes of water laws by the States to be benefited.

4. That the land laws should be modified by repealing the Desert Act and by requiring cultivation as well as residence on a homestead.

5. That non-irrigable grazing lands should be leased in small tracts so as to unite the irrigable and the pasture lands.

## AGRICULTURAL ENGINEER.

### Mountain Roads.

JAMES W. ABBOTT in Year Book U. S. Dept. of Agriculture for 1901.

Mountain roads must not be considered alone from industrial or utilitarian standpoints. The inspiring, health-giving effects of mountain air and mountain scenery are universally conceded. For those living in them, and for those who come to them for business, pleasure or health, the need for roads which can be traveled in safety and comfort is just as imperative as it is elsewhere. In all the older settled regions of the country the sentiment which demands good roads is increasing with marvelous rapidity. This should not and will not halt at the foot of the mountains.

The conclusions as to practice presented in this paper, formed by the writer during twenty-five years largely spent in building and operating mountain roads, have been modified or confirmed by much conference with men of large experience and well-digested views on the subject. They are offered in the modest hope that in the criticism which may be elicited, the records of experience which may be presented by others, and the careful study of the subject which is now going on, better methods in mountain road building will result.

The suggestions are intended to meet the conditions existing in Western mountain counties, where population and means are usually quite limited. They relate to a standard for road building which, while not elaborate or expensive, is certainly attainable and would be far in advance of prevailing average practice.

**GRADE, THE KEY TO CORRECT METHODS.**—The key to all correct methods of mountain road building is grade. It is generally expressed by percentage. A 1% grade means a rise of 1 foot for each 100 feet of horizontal distance traveled. There are 5280 feet in a mile. Hence a 1% grade means a rise of 52.8 feet in that distance, a 2% grade a rise of 105.6 feet, and a 10% grade a rise of 528 feet.

The proper grade in each case must be determined by the conditions and requirements. For bicycle travel a 2% grade can be ascended with comparative ease and descended with little effort. Heavier grades, up to 5%, are practicable for this purpose when unavoidable. They can be ascended by the average bicycle rider without extremely arduous effort and descended without serious danger. Grades above 5% are too steep for ascent with comfort or descent with assured safety.

For pleasure driving the grade, where practicable, should not exceed 4%. A good horse with a light buggy and two persons will trot easily up a 4% grade and as easily down without a brake. With a higher gradient the strain in either direction becomes increasingly apparent.

For freight traffic the maximum grade admissible is 12%. Four animals, together with the one or two wagons used on a mountain road, are all that one driver can safely and properly handle on steep grades. When he uses two wagons, lead and trail, at every stop ascending he must hold both wagons by the brakes on the lead. In descending with heavy loads, excepting when the roads are icy, he must control his wagons with brakes on both—the lead by the lever beside his seat, the trail by a strap leading to the brake lever. When the road is icy he must control the descent by rough locking one or more of his rear wheels. To rough lock, he attaches some rough device, like a piece of chain, or a short steel runner, grooved on the upper side to fit the tire and with projecting prongs on the lower, to the felly of a rear wheel, just in front of the point where it rests upon the ground. A chain attached firmly to the center of the forward axle is then tightly fastened to this rough lock. Thus secured, as the wagon descends the hill the wheel remains rigid and the rough lock plows into the surface of the road.

(TO BE CONTINUED.)

## THE APIARY.

### A Large Beekeeping Enterprise in the San Joaquin.

A California correspondent of *Gleanings in Bee Culture* gives an interesting account of a large honey plant in the San Joaquin valley. He says: I formed the acquaintance of O. W. Stearns of Selma, in the San Joaquin valley, some seven years ago. He then owned some 200 colonies of bees. Upon a recent visit to Selma I found he had increased considerably in all directions. In the matter of bees he owns 500 colonies and was running 100 more on shares.

Mr. Stearns commenced beekeeping at the age of fourteen, in Iowa. He has been in California about ten years; and, although he is now owner of 500 colonies, he is not satisfied, but is ready to buy any apiary that happens to be for sale. He manages all his apiaries, and manufactures quite an amount of foundation; he does nearly all of the work himself, and I propose to give you just a little glimpse of how he does it. His bees are in four or five apiaries, all away from home, one apiary being nearly 20 miles away.

**TRAVELING KIT.**—Mr. Stearns has no honey house and outfit at the out-apiaries, but carries it all in his wagon. On account of its compactness and practicability, the two-frame Cowan extractor is used. Then there is the tall tank, capacity about fifty gallons. A common galvanized iron washtub is telescoped over the top of it. This is for cappings. Tent and tentpoles, and several 5-gallon tin cans for the honey, complete the load.

Upon arrival at the apiary the tent is erected, and right here allow me to remark that, when the temperature is above 100°, that tent is a fearfully hot place, and Mr. Stearns contemplates using a portable wire-cloth arrangement with a covering of willow branches. This would be a great improvement over the tent.

The tent in place, the extractor is mounted upon a hive and held firm with a strong cord or wire from the top, to pegs in the ground right and left. If a super is ripe for extracting, the combs are removed and shaken one by one. No brush is used. If the bees do not all shake off, they are taken to the tent, and escape as they may. No wheelbarrow is used. The super in which the combs are placed is carried in arms. The reason for not using a wheelbarrow is the trouble of carrying it around; but I am quite sure if Mr. Stearns would get a light wheelbarrow he would not mind the trouble of tying it to the wagon somewhere.

The uncapping arrangement is made from two 5-gallon tin cans. The side is cut from one; the side and the center of the opposite side cut from another piece of wire cloth is put over this center hole, and, when placed on No. 1, it is ready for use and is a very simple arrangement.

The 50-gallon tank is mounted on another hive; and when the extractor is full the honey is drawn off into another 5-gallon can. One side of this can is cut through the center lengthwise, and the parts rolled back and over the sides. These rolls of tin serve as handles, and a good grip can be secured, though the hands may be sticky with honey. Mr. Stearns is not a tall man, and he has to lift the honey nearly as high as he is tall. The two-frame extractor works like a charm. I really believe that, owing to the ease in stopping and starting, and the few whirled it takes to extract the honey, just about as much can be done with it as with a four or even a six-frame machine.

Mr. Stearns aims to fill that 50-gallon tank twice during the day, and, of course, it has to be drawn right off into cans. The honey is quite thin as it comes from the hives, for it is not much more than a third capped. Owing to the honey being so thin, all particles soon rise to the surface, and no strainer is used. There is necessarily much refuse comb and lots of dead bees on the surface, and all of this is taken home in the tank and strained. The temperature also has something to do with the thinness of the honey. When I observed operations, it was up to 106°. Mr. Stearns has never been troubled with sour honey; but, as one of my hobbies is having honey thoroughly strained, I believe Mr. Stearns' would be improved by the use of one.

**THE MOVES.**—When the apiary is done in one, two or three days, according to size of apiary, honey flow, etc., the whole outfit is loaded into the wagon and taken to the next apiary. Every night the team is driven home with a load of honey. In the height of the honey season this means work almost night and day. The start for the apiary is made as early as 4 o'clock in the morning, and it is nearly midnight before the load gets home; sticky with honey and weary, he often sleeps on the way, while the faithful team keeps plodding along.

**YIELDS.**—One of Mr. Stearns' best yields was about twenty-three tons, and in the securing of it there is something more than a holiday exercise. It requires as much downright hard work as any other rural occupation; but, when the work is done, there is the satisfaction of accomplishing large results from a very insignificant source—the little bee.



## Agricultural Review.

### BUTTE.

**DEMAND FOR SMALL TRACTS OF LAND.**—Chico Record: Since the Bidwell lands were placed on the market, something over one year ago, \$172,000 worth has been sold, and principally in small tracts. So successful has been the sale that Surveyor Shackleford and the Bidwell management are now about to enter into an agreement whereby nearly all of the remaining lands are to be surveyed into subdivisions. Mrs. Bidwell does not desire to maintain an immense landed estate, and prefers to see the old rancho transformed into comfortable homes and supporting a large population of industrious people.

### EL DORADO.

**ANGORA MEAT FOR SAN FRANCISCO MARKET.**—Sacramento Bee: E. W. Cowell of San Francisco passed through Sacramento recently with a flock of 370 Angoras for the San Francisco market. They had just been driven down from their summer range in the mountains, and were very beautiful animals. Their fleece was white and silky and all of them were fat and in fine condition. The flock consisted of wethers only. They are worth in San Francisco about \$4 a head. They will be converted into "mutton" or "lamb" and the pelts sold for rugs or other purposes. While there is more or less prejudice against goat meat, which prevents its being sold under its proper name, the best authorities say that the flesh of young Angoras, and especially of kids, is delicate and of good flavor. Mr. Cowell has about 5000 Angoras, which make perhaps the largest number owned by any one person in this country. His ranges are principally in El Dorado and Santa Cruz counties. He speaks well of the goat industry, saying that he considers the outlook good; that there is room for a large development of it in this State, and, in fact, in most parts of the United States.

### LOS ANGELES.

**SEWER FARM'S WALNUT CROP.**—Pasadena Star: The crop of walnuts raised on the Sewer Farm, owned and conducted by the city of Pasadena, yields this year a revenue of \$3250. The crop of the eighty-five acres of walnut trees amounted to 52,432 pounds, of which 28,628 pounds were first quality. The farm has fifty acres of walnut trees which are yet too young to bear. When all are in full bearing, the revenue from this institution will form a very considerable part of the city's income. Sixty acres were planted to corn this year, after the barley hay crop had been harvested. This corn is being fed to pigs, as it is thought the pork will bring in more than the corn.

**FIRST NAVELS.**—Pomona Progress: The first car of Navel oranges to be sent from the city of Pomona this season was started for Chicago from the Pay Fruit Co.'s North Pomona packing house Thanksgiving day. Last year the company shipped its first car on Nov. 3.

### MERCED.

**THE MULE INDUSTRY.**—Merced Star: The production and exportation of mules is quite an important industry in the San Joaquin valley. Mule buyers have been numerous this season. One from Missouri, who has been doing business in the valley for three months, purchased and shipped to his State 3000 head. Some of them were destined for coal mines in Pennsylvania and some for Canada. The prices paid ranged from \$60 to \$100. Last Thursday a shipment of five carloads of these animals was made from Merced over the Santa Fe road. Notwithstanding the large number of mules shipped out of the valley within the past few months there are large numbers of them remaining. At present prices the raising of mules would seem to be a profitable industry.

### ORANGE.

**EARLY PLANTING OF BEET BEETS.**—Anaheim Gazette: Senator Jones has made contracts for 4000 acres to be planted to sugar beets, seeding operations to begin early in December. This early planting will be an unusual experience to beet growers, inasmuch as the planting season formerly began in February or March. Early planting is for the purpose of giving beets the benefit of the December and January rains. Senator Jones is desirous of securing additional contracts to the extent of 1000 or 2000 acres.

**THE WALNUT ASSOCIATION.**—Santa Ana Blade: The Santa Ana Valley Walnut Growers' Association's packing house has closed down for the season. The output will be about seventy cars of good nuts and two or three of culls, and all have been shipped but three or four cars. The nuts handled by the Association will bring in the neighborhood of \$125,000.

A large per cent of this has already been received and distributed among the growers, less, of course, the discount and operating expenses.

### PLACER.

**A MONSTER LEMON.**—Sacramento Bee: The main showwindow of the Sacramento Chamber of Commerce is well filled with a single article of fruit, grown in a sunny foothill orchard of northern California, a short distance from the Capital City. The fruit in question was a lemon, which was grown in the Pineville orchard, owned by Mrs. French Martin, near Loomis. The lemon is a whopper, weighing 3½ pounds, and is 25 inches in circumference, measured the long way, and 22 inches in circumference, measured at the base, the round way. The monster lemon comes from a seedling tree ten years old.

### RIVERSIDE.

**GOVERNMENT LAND.**—Anaheim Gazette: An important document signed by President Roosevelt has been received by the United States Land Office in Los Angeles, throwing open to settlement over 70,000 acres of valuable land in southern California. The territory is on the San Jacinto forest reserve, and is officially designated as townships 8, 9 and 10 south, range 8 east. This is one of the sections that the forest survey arbitrarily took in when the reserve was created in 1897, though it was not forest land. The region lies south of Indio, not far from the line of the Southern Pacific Railroad, with the little towns of Walters and Thermal situated along its edge. The three townships will be opened January 22, 1902, on which day settlements will be subject to entry. The land is claimed to be adapted to every form of agriculture.

**LIMA BEANS IN HEMET.**—Hemet News: The Van Winkle Mercantile Co. has succeeded in growing a good crop of Lima beans on the Hemet tract, a mile or more southeast of town. The beans were planted very late. Many of them are now nearly ripe. Lima beans ripening in the latter part of November in Hemet will seem incredible, but it is a fact, nevertheless.

**SEEDING FOR GRAIN.**—Riverside Press: Thomas Kerr reports having 2300 acres seeded and plowed to date on the Kerr ranch, near Armada, with the big Barney engine, which is now carrying fifty-five shears on its gangs, having increased from forty-three shears up since they first began. They are now plowing fifteen acres an hour, or 125 acres a day. It would take 100 head of horses to do the work the engine does, as it handles one 10-gang, three 9-gangs and three 6-gangs—ordinary gang plows hitched to an evenner. Their big barley field is all up, and as green as an onion bed, and their wheat is nicely peeping through.

### SANTA CLARA.

**BIG SALE OF PRUNES.**—A San Jose dispatch, under date of 29th ult., states that, after the pendency of negotiations for several days, the largest prune deal in the history of the State was closed by the A. & C. Ham Co. of San Jose purchasing from the California Cured Fruit Association between 20,000,000 and 30,000,000 pounds. This is practically the whole, or a large portion, of the left-over stock from last year. It includes the sizes from 50's to 60's, 60's to 70's, 80's to 90's. The company also buys all the 100's and small sizes. The Ham Co. has already disposed of the prunes to an Eastern company. The buyers refuse to make known the exact purchase price.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian: Unglish Bros. of Pajaro shipped out two carloads of dried apples this week. They are turning out about ten tons of dried apples each week, and will run as long as stock is offered, perhaps until after Jan. 1. G. W. Sill shipped out fourteen cars of green and dried apples recently, and he says it wasn't much of a day for business either. He is just getting ready for the "grand finish" of the season. He has over 100 cars of Newtowns to move.

### SONOMA.

**LARGE SALE OF HOPS.**—Santa Rosa Press-Democrat: The largest hop deal ever made in Sonoma county hops was made by Chris C. Donovan, who purchased from Farmer & Peterson 1500 bales of hops. The price paid was 10½¢ a pound. In coin this will figure up \$25,000. The Farmer & Peterson hops are a choice article and shipments will be made by the buyer to the East and Europe.

**WINE GRAPES SHOW HIGH PERCENTAGE OF SUGAR.**—Mark West Springs Correspondence Sonoma County Farmer: Light Bros.' winery has been a great convenience to our vineyardists and is stimulating experiments with resistant stock and causing the acreage in vines to be materially increased. The light first crop and favorable weather caused the second

crop to ripen more quickly than usual, with the result that the vintage is practically over. The earlier rains increased the weight of the grapes and had the tendency to hasten fermentation; the color and quality is unexcelled. Some of the grapes tested 32% sugar. Six hundred tons, at \$20 a ton, have been crushed at the winery, giving over 85,000 gallons, 31,000 gallons having been hauled to Callstoga for storage.

### SUTTER.

**BUYING MULES FOR SOUTH AFRICA.**—Sutter Independent: A number of small bands of mules passed through town to Marysville this week. An agent of the British Government has been canvassing the county for several days, buying up small mules to be shipped to South Africa. A large number have been purchased around Sutter City and Meridian.

**FIG PACKING NEARLY FINISHED.**—Sutter County Farmer: Fig packing still continues brisk at the Rosenberg Bros.' establishment on B street, but another week will about complete the season's work. The pack this year will be about the same as last in the neighborhood of 45,000 boxes.

**PRODUCING SORGHUM.**—Sutter County Farmer: J. L. Buckingham brought several barrels of sorghum molasses to town this week for the local dealers. The cane was raised on the Stewart tract below Yuba City and crushed this fall, making a fine grade of molasses.

### TEHAMA.

**TREES CONDEMNED FOR SOUR SAP.**—The County Board of Horticultural Commissioners, composed of Messrs. T. J. Ramsay, Vina; R. W. Coates, Red Bluff, and W. A. Sampson, Corning, met at the latter place Friday and made out their monthly report. During the month they examined a lot of trees shipped here from an Eastern State and found some of the trees affected with sour sap. Those so affected were condemned.

### TULARE.

**A SURE CATCH FOR COYOTES.**—Tulare Register: G. B. Blankenship and his father, William Blankenship, have been able to swap chickens for coyotes right along lately, having gotten ten coyotes within the past month, and this is how they do it: They take a chicken, and with a pair of scissors clip the feathers off its back, then pour on honey that is worked well down into the feathers, then put on strychnine that is worked well down into the honey, then stake the chicken out near a wolf runway, where they trot along to go for water. Any close observer can learn their road to and from water, and picket the chicken out so it can't get away. By and by a coyote will come along and will pounce onto that chicken and eat it all up, not stopping at the honey and feathers. The strychnine will do the rest. By this sort of exchange they have been able to get a coyote at the cost of a chicken, and that is better than giving many chickens and getting no coyote. If all the farmers will adopt this plan the coyotes will soon be thinned out. It is a little hard on the chicken.

## Horse Owners! Use GOMBAULT'S Caustic Balsam



A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Taken the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

## Grocery Sense

People now-a-days are cautious about what they buy for the table. A modern tendency to cheapen methods of manufacture at the expense of quality has made this caution necessary.

Our old-fashioned notion is the most of persons still want quality rather than price in the things they eat—and our brands are packed on that principle—quality first—then price—satisfaction always. Our catalogue tells the rest. Send for it. Complete one ready.

## SMITHS' CASH (Dept.) STORE,

Families Supplied at Wholesale Prices.

25 MARKET ST., S. F.

## UNQUESTIONABLE PROOF OF THE EVERY-DAY SUPERIORITY OF THE IMPROVED U. S. SEPARATOR

"The kind that gets all the cream"



Prof. W. J. Spillman, of the Washington State Experiment Station at Pullman, in an article in the *Ranch and Range*, Seattle, Wash., of August 15, 1901, gives the record of the testing of five samples of milk from dairymen using U. S. Cream Separators.

The five tests were as follows:

.00, .00, .01, .01, .04

An average of .012 of one per cent.

Please notice that in two of the samples the professor could find no fat, and in the poorest one only .04. (Probably this dairymen did not run his separator according to the directions.)

These records show that the U. S. Separator is without a peer in thoroughness of separation.

## Highest Award at the Pan-American Exposition

Write for descriptive catalogues giving full information.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.



# Juggling of Separator Facts

— AT THE —

## BUFFALO EXPOSITION.

One of our desperate would-be competitors persists in its unscrupulous juggling of Separator facts and records at the Buffalo Exposition. One lie or misrepresentation stamped out it bobs up the next week with another. But everything must come to an end, and as a correspondent pertinently writes us "long after both these second-rate imitating machines and their projectors are turned into poor fertilizer the De Laval will continue—as in the past—to demonstrate its all-round superiority to anything else ever made in the shape of a cream separator."

The De Laval Cream Separators having been awarded the Gold Medal at Buffalo and the concern in question a gold medal on its combined exhibit of churns, separators and Babcock testers, it at once brazenly advertises having received "the Gold Medal and Highest Award" on its "separators," without qualification, in the hope to thus influence some possible separator buyer.

Next it proceeds to put out what purports to be a skim-milk record of the work done by the "U. S." machines in the Model Dairy at Buffalo. As a matter of fact this is not a record of the full run of the machines but simply of a selected part of it. Much of the "U. S." work during the first month of their run would not compare favorably with ordinary gravity setting. It was so bad that one machine was thrown out altogether. Their average for the full time shows a skim-milk loss of nearly three times the published figures.

Even then these so-called "skim-milk" records were but mere jugglery and show absolutely nothing as to the practical work of the machines. These "records" were achieved only through excessive speed, excessive power, cutting down capacity and running so thin a cream that more fat was lost in the churning than saved in separating. The following voluntary statement from the engineer of the Model Dairy tells its own story in this regard:

BUFFALO, N. Y., November 2, 1901.

THE DE LAVAL SEPARATOR CO.,

74 Cortlandt St., New York, N. Y.

Gentlemen:—As engineer of the Model Dairy at the Pan-American Exposition, Buffalo, I was impressed with the following points of merit in the running of your Cream Separator. It did its work very smoothly and quietly, showing by its running its mechanical excellence. I could run it with a much smaller consumption of fuel and lower steam pressure. In fact, it took but one-fourth as much steam to do our work with it as the "United States" separator used to do the same work, and at no time did I have to force my fire or boiler to keep up the supply of steam as I did when the latter machine was in use.

We were sorry to see the De Laval leave on June 28 and glad to see it returned on August 9, as it made less labor for all. Your representatives let the regular Dairy force handle it, while your competitor, the "United States," had an expert to run their machine during the greater part of the time of their run, and even then he could not make a record for close skimming except by running his machine at an excessive speed of 11,000 to 12,000 revolutions a minute, cutting down the capacity, and making a thin cream. One morning in particular the cream was so thin that I had to run the churn two hours and twenty minutes before the churning was done.

While I am not an expert in creamery work, I hold a first-class engineer's license and I want to say that your separator from a mechanical standpoint, in the design and finish of the parts and in the economy of fuel and labor, easily ranks first, and I do not wonder that your competitors would rather not place their machines alongside yours.

Yours very truly,

JAMES F. DOWNY,

Engineer Model Dairy.

The published records of the De Laval machine in the Model Dairy at Buffalo were made under practical use conditions, such as may be duplicated by any De Laval machine in every-day use, and the machine was run by the Exposition employes themselves and not by a manipulating expert juggling for "skim-milk" records.

## THE DE LAVAL SEPARATOR CO.

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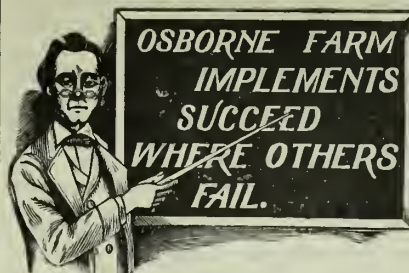
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Adjustable teeth.

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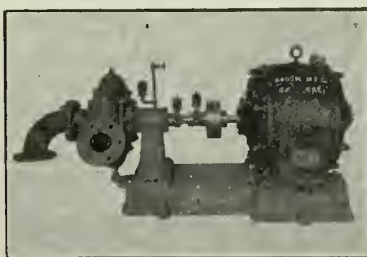
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## THE HOME CIRCLE.

### The Best Authority.

They say that worldly goods and gauds  
Are all that's "worth the while;"  
They say romance is out of date,  
And love is out of style;  
They say a bright tiara's gems  
Will solace any throe,  
But Philip, blue-eyed Philip,  
He does not tell me so.

They say that lovers' strongest vows  
Have proved but brittle things,  
That Love must fly, since Art portrays  
The little god with wings;  
That youth's fond fancies quickly fade,  
That men inconstant grow;  
But Philip, faithful Philip,  
He does not tell me so.

They say that one should only think  
Of lofty birth and place;  
They say it makes one thrill with pride  
To set the social pace.  
They say a cottage on the green  
Must be forlorn and slow,  
But Philip, ardent Philip,  
He does not tell me so.

I let them prate of pride and pelf,  
I care not what they say.  
O heart of mine! to-morrow's sun  
Shall light our wedding day.  
Within our cottage Love, content,  
Shall ever bide, I know,  
For Philip, dearest Philip,  
He says it shall be so.

—Beatrice Hanscom in Century.

### The Turning Point.

The 4 o'clock train went speeding along the level line of the railroad one sunny afternoon, just ten years ago, and among its passengers were two young and handsome men, who had met on the cars by chance, but who had been intimate friends at school and college, and who were intimate friends still, if one might judge by the fervor of their greeting and the earnest manner in which they conversed, without taking the least notice of any person around them.

At last the elder of the two, a tall, dark, young man, with large, dark eyes and jet black hair and whiskers, arose from his seat, took his traveling bag from the rack and began to shake the dust from his coat and to wipe it from his face with a cambric handkerchief, as if his journey was drawing near its end.

"Then you are sure that you won't come with me, Harry?" he asked, looking anxiously into the fair, frank face of his companion.

"I cannot," was the low reply.

"Well, at least remember what I have been saying to you to-day. Give it up, Harry—the drinking, gambling, the folly of all kinds. Begin to save your money, instead of spending it all, as you do now, and as I used to do, and in three years, or perhaps sooner yet, you may be traveling this way or some other way, bound on my present errand, with a neat little wife waiting for you at the journey's end. It is worth far more than all the rest, my boy. I know, for I've tried both ways."

"Why, what nonsense it is to talk to me about saving, George! Look there!" cried Moore. He drew out his pocketbook. In one compartment nestled a ten-dollar greenback. In the other were two one-dollar bills. In a third, a little crumpled roll of currency, and in the fourth, a tiny case filled with postage stamps.

"Behold my worldly wealth!" said he, in a mocking tone. "There is all I have before the next quarter's salary is paid. And while I live in New York, I must spend the whole of my salary. I cannot save it. Expenses are too high."

"Then do as I did," said his friend. "I found the temptations and expenses of New York life too much for me. I could not save, and what was worse, I found that I was giving way more and more to the habit which I want you to leave off, Henry. I gave up my place and went to yonder little town, wherein an uncle of mine lived. I stated my case to him. He helped me. He got me a situation in the leading store here, he took me to board at his house and watched over me like a

father till I cared no more for drink. After that, it was easy enough to save, Henry, and I soon worked my way up to home and happiness. Oddly enough, I started with only ten dollars in my purse. But I was far worse than you are. Cannot you get something to do in some quiet, country place like this, where you will be kept out of temptation as I was? Try it, old boy. Write to me a month hence, and if you have not found the place and the people to cure you by that time, I'll find them for you. Is that a bargain?"

"Yes," said Henry Moore, speaking on the impulse of the moment.

They parted. Henry Moore watched his friend as he stepped into a waiting carriage at the station, and drove away to meet his bride upon his wedding night. Then, as the train steamed slowly off again, he thrust his pocketbook back into the breast of his coat, and leaning his cheek upon his hand, gazed moodily out upon the flying meadows and forests, while he mused upon his schoolfellow's happy fate.

"The last time I saw him, he had been drinking heavily nearly all through the night," he thought. "Gambling, too, and losing. His face looked purple and flushed; his eyes were heavy and dull; his cheeks were bloated; his hand shook like the hand of an old man. How different now. He is as handsome and fresh-colored as he was in his boyhood. He is eager, alert, full of life, hope and happiness. While I—" a heavy sigh finished the reflection.

The train sped on. The young man lost in painful memory of misspent hours, still leaned his forehead against the window frame, gazing on all that passed before him as if he saw it not.

Suddenly, as the train decreased its speed again, and the warning bell began to ring, a tableau flashed before his eyes that roused him in a moment.

For half an hour past their way had led through a dense pine forest, rising greenly on either side of the cars.

But now there came a sunlit streak among the trees beyond his window, and in the long, oval space thus formed he saw a lowly, but sung-looking, gray cottage, with vine shaded porches and portico, a green and level lawn, with a lake flashing brightly in the sun beyond it; and on the lawn a rosy, healthful girl of seventeen, standing with her arch, mischievous face turned toward the passing train, and her arms clasped grimly around the neck of a small, black pony, saddled and bridled, who seemed terribly frightened at the noise, yet perfectly docile to her voice and touch.

Other figures filled the background. The farmer, stout and hearty, dressed in blue overalls, and wiping the perspiration from his brow, as he lifted his straw hat aside—a neatly dressed matron on the porch, shading her eyes with her hand, as she watched the train; a great, black Newfoundland dog, parading about in a dignified manner, with a lady's riding whip in his mouth, and a dapper young gentleman in a light, summer suit approaching the lady and her steed. He saw them all as one sees faces and figures in a vivid dream, and wondered almost audibly what "that fellow" was doing there; and then, as they plunged once more into the unbroken solitude of the pines, that girl's face seemed to stand out visibly in the air before him and accompanied him, like a smiling spirit of good omen, to his journey's end.

Late that night, when, after eating supper and reading the evening paper, he went up to his room, the face was there before him, smiling like a picture from the bare white wall. He had gone up there to make some alterations in his dress before going out to get rid of the rest of his evening in the city streets; but the face detained him, held him there in the cheerless fourth-story chamber, even against his will.

"How graceful she was!" he groaned out. "What a pretty—what a sweet face she had! How blue her eyes were! How brown her hair was and how it waved about her head and face like a little, soft, dark cloud of curls! She must have been ill lately, or she would not wear her hair like that; every other girl is piling chignons up higher than the moon. And

yet she looked the very picture of health. Her cheeks were as round and as rosy as the apples in her father's orchard. Perhaps she is too sensible to wear chignons and false hair. Perhaps she don't care so much for dress as other women do. What did she wear? I can't remember. I only know it was some soft dun-colored material falling about her in soft folds, without ruffling or paniers of any kind. And a blue ribbon at her throat—blue as the 'bluets'—blue as her own sweet eyes! Oh, dear! If I could but meet a girl like that—a girl with 'no nonsense about her,' as Mr. Toots would say," he added with a laugh—"a girl who would marry a poor man because she loved him, and who would go to work and help him build up his fortune and his house together. Why it would be the making of me!"

He took out his pocketbook and looked again at the ten-dollar bill.

"Shall I try it? Jerrold says he began with no more; and look how well he has done. Let me see. Here is enough to pay for my supper, lodging and breakfast, and my ticket back to the place where I saw her. That will leave me the roll of currency for small expenses, and the ten dollars for my sole capital till I find a place and work. Her father is a farmer, I know. And that chap in the gray summer suit hates hard work. I saw it in his face and walk. I'll do it. He can but refuse me at the worst, and I shall be able to look at that sweet face again. I'll go."

"You know he is not very strong, father, and his hands have grown white and soft at college, and, as he says, he is not fit for the work," she was saying when her father's growls ceased suddenly; and, looking up, she saw a tall, handsome, Saxon-faced and bright-eyed young fellow, dressed in homespun, taking off his hat to her and her father in the way that did not smack of country birth and training by any means. The light blue and the dark blue eyes looked straight into each other's depths for one bewildering moment. Then the girl turned away and walked out of the field, with a sudden vivid blush staining the whiteness of her throat and forehead; and the young fellow, gazing after her involuntarily, began his story to the amazed farmer and asked for work.

At 12 o'clock that day Jane Halliday, after giving the last touches to the well-spread dinner table, took the tin horn and went out on the side piazza to "call the folks" to their noon-day meal. She saw the heads turn, and the bending forms straighten themselves as the echoes of the mellow blast floated over toward the distant hills, and lingering yet a moment felt her cheek grow hot again, when she saw the young man advancing with her father toward the house.

"Here's a new hand, mother," sang out the farmer to his buxom wife, as they entered the kitchen together. "He came along to look for work just in the nick of time, after your dandified nephew cut and run for fear he should tan his cheeks. You'll make Dick's bed up for him to-night, Jane. He is worth his salt, I must own, and he shall stay here as long as he likes. Now, mother, dinner—hurry, Jenny, hurry!"

They sat down to the table. Jane's chair was directly opposite that which the new hand occupied, and presently the farmer called out, wonderingly: "Salt in your coffee, Mr. Moore! Well, I do vow! That is a queer taste of yours, anyhow!"

"I drank it so as a child, but I think I'll give it up after to-day, as I am to do farming work," stammered the young man, scarcely knowing what he was saying and unwilling to own his blunder lest its cause might possibly be guessed.

"Gracious!" said the farmer.

But the good wife quietly changed the cup for another, properly sugared and creamed, and the new hand thanked her by a bow that set her marveling in her turn.

"He don't look one bit like a farmer, Jane," she said, watching them go

back into the field after dinner. "And yet he must take hold of the work pretty well or your father wouldn't be as pleased with him as he is."

Jane made a brief reply and changed the subject as speedily as possible. She had seen beneath her long eyelashes how the stranger's eyes were fixed upon her when that mistake with the coffee occurred.

"What a ridiculous excuse," she thought, smiling.

And then a sudden recollection flashed across her mind with stunning emphasis and meaning. Was it a dream? Or was it real? That rushing train—that open window—that moody look flashing into sudden brightness as it caught and answered her own laughing glance while the cars whirled by. No wonder the face seemed so strangely familiar to her in the fields that morning. But what—oh, Jane of the fair face and innocent eyes and soft clustering locks—what could it all mean?

Cousin Dick returned no more to the farm that summer. But the new hand stayed and worked faithfully all through "haying and harvest times," much to the farmer's delight. At the end of the season the farmer made the young man a liberal offer for the ensuing year, and thereupon ensued a long and confidential conversation between the two.

"Give me twenty-four hours to make up my mind," said Moore, at last; to-morrow morning you shall have your answer."

So, when the 4 o'clock train came thundering past the farm that evening, the new hand stood on the lawn alone and watched it with thoughtful eyes. Taller and straighter he looked than when he first came, and there was a healthy flush on his cheek, beneath the sunburn, that told of a different, a nobler and holier life than the former one had ever been.

The farmer was busy at the barn; the good housewife, in the kitchen, was hurrying onward her preparations for tea, and Jane, with a tin basin in her hand, came out of the house and turned toward the garden as he looked that way. Her errand was for fruit for the supper table, but before the first handful of berries had rattled down upon the bottom of the basin, the girl started, listened a moment and then turned crimson as the new hand came up beside her. The berries were neglected. He stood still a moment, then dropping basin and berries upon the grass, he held her by the hands.

"Jane, your father has asked me to stay here and help him with another year," he said. "He offers me good wages, and I am safe here—safe from many a temptation that you know nothing about—thank God. I am a better and happier man for my stay here this summer, but there is room for improvement yet. It rests with you to say if that improvement shall be made."

"With me?" said Jane, glancing up at him with a gentle smile.

"With you; with you alone."

"Then stay."

He took a pocketbook from the breast of his coat and opened it.

"Jane, you see that ten-dollar bill?"

"Yes."

That marks the turning point in my life. I was going headlong to destruction when a friend held me back. I had but ten dollars to begin the world with again if I gave up my place and salary in New York. Yet my friend advised it. It was what he had done, and in three years he had earned a home and was married in another place. He had been as wild and as reckless as I was then, and it was seeing what a little sober effort had done for him that encouraged me to try. I came here—and you know my life and thoughts and habits from that day. We have been happy here together, Jane."

"Oh, very happy," was her reply.

"But now there must be a change; I cannot go on in the old way any longer, Jane; your father likes me and I believe I may stay here forever so far as he and your mother are concerned. Now for their daughter. There is ten dollars, and that is what I earned by sheer hard work these



last six months added to it. I shall receive four times that sum another year from your father if I stay. Will it be enough, Jane for me and my wife?"

She was silent. Bending down to look at her, he saw that her eyes were full of tears.

"Can't you like me, then?" he asked, in dismay.

"Oh, it is not that; it is father and mother," she whispered. "I must not leave them."

"There is no need, my love. I may tell you now that your father has given his consent, and your dear mother will not be long behind him. Oh, Jane, my darling! I found my hope, my joy and my salvation that day I came to the Lone Pine farm."

"And not a single berry for supper!" bewailed Mrs. Halliday, when they returned at last to the house. But a tearful smile succeeded the lament, as, after a brief whisper from Jane, she kissed her prospective son-in-law.—New York News.

### Laughter and Long Life.

It may be that some enthusiastic and laborious German statistician has already accumulated figures bearing upon the question of length of life and its relation to the enjoyment thereof; if so, we are unacquainted with his results, and yet have a very decided notion that people who enjoy life, cheerful people, are also those to whom longest life is given. Commonplace though this sounds, there is no truth more commonly ignored in actual every-day existence. "Oh, yes, of course, worry shortens life, and the contented people live to be old," we are all ready to say, and yet how many people recognize the duty of cheerfulness? Most persons will declare that if a man is not naturally cheerful he cannot make himself so. Yet this is far from being the case, and there is many a man who is at present a weary burden to his relatives, miserable through the carking care of some bodily ailment, perhaps, or some worldly misfortune, who, if he had grown up into the idea that to be cheerful under all circumstances was one of the first duties of life, might still see a pleasant enough world around him. Thackeray truly remarked that the world is for each of us much as we show ourselves to the world. If we face it with a cheery acceptance, we find the world fairly full of cheerful people glad to see us. If we snarl at it and abuse it, we may be sure of abuse in return. The discontented worries of a morose person may very likely shorten his days, and the general justice of nature's arrangement provides that his early departure should entail no long regrets. On the other hand, a man who can laugh keeps his health, and his friends are glad to keep him. To the perfectly healthy laughter comes after. Too commonly, though, as childhood is left behind, the habit fails, and a half-smile is the best that visits the thought-lined mouth of a modern man or woman. People become more and more burdened with the accumulations of knowledge and with the weighing responsibilities of life, but they should still spare time to laugh. Let them never forget, moreover, and let it be a medical man's practice to remind them that "a smile sits ever serene upon the face of Wisdom."—London Lancet.

**JEWELER**—See here; you want to be more cautious. What was it you said about that cheap watch you sold to that customer? New Salesman—I told him it would work like a charm. Jeweler—But don't you know we can't guarantee those watches to keep time? New Salesman—Well, charms don't keep time.—Catholic Standard and Times.

"So!" EXCLAIMED Senator Sorghum, melodramatically; "that politician says I have betrayed my trust, does he?" "Yes." "Well, you can go and tell him to his teeth that he has uttered an untruth. I have stood by my trust ever since it put up the money for my campaign, years ago."—Washington Star.

Have you heard the story of three eggs? Too bad!

### Trodden Kisses.

Between the earth and thy dear feet  
To set a barrier were unmeet;  
Fear not; thy steps, when thou dost pass,  
Shall lie as lightly as the grass.  
O music of thy footsteps dear!  
New blossoms strangely springing here!  
Flowers, on the earth erstwhile unfound!  
Close kisses trodden on the ground!

—From Philostratus, by Percy Osborn.

### Rest for Women.

The rest hour is quite as necessary to women in summer as in winter. There are very few people who are not better for going away by themselves, if only fifteen minutes or half an hour during the day. Lie down on the bed or lounge, allow the muscles to relax and try to banish all perplexing thoughts. Make certain that you will never be interrupted or subject to call during these few moments, and the habit of sleep will come to you. A rest of even ten minutes, free from interruption, will do more toward soothing the nerves than four times the same length of time spent lying down with noisy children near, or thoughtless persons discussing the latest fashion. The important matter is to secure for the tired worker absolute peace at the rest hour. Even without sleep it is better than a rest hour amid noisy surroundings in sleep which is almost certain to be a troubled one. As a matter of ceremony, the rest hour should be insisted on, because work done after it is certain to be so much better that it much more than makes up for the time taken from work. Work accomplished with the nerves exhausted never amounts to as much as work done when the energies are fresh.

**BRIDEGROOM**—I don't see anything of your father's \$10,000 check. He promised it, didn't he? **BRIDE**—Yes; but he saw that your father had already given us one, and he knew we didn't care to have any duplicate presents.—Philadelphia Record.

### How's This?

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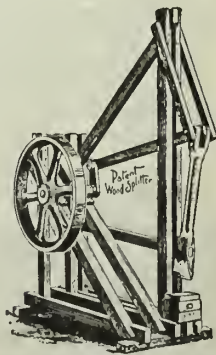
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# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Dec. 4, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	May.	July.
Wednesday.....	75 1/4 @ 76	63 3/4 @ 64 1/4
Thursday.....	76 @ 77 1/4	64 1/4 @ 65 1/4
Friday.....	76 @ 77 1/4	64 1/4 @ 65 1/4
Saturday.....	77 1/4 @ 78 1/4	65 1/4 @ 66 1/4
Monday.....	76 3/4 @ 78 1/4	66 1/4 @ 67 1/4
Tuesday.....	78 1/4 @ 78	68 @ 69

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	May.	July.
Wednesday.....	42 1/4 @ 43	38 3/4 @ 39 3/4
Thursday.....	43 @ 43 1/4	38 3/4 @ 39 3/4
Friday.....	43 @ 43 1/4	38 3/4 @ 39 3/4
Saturday.....	43 @ 43 1/4	38 3/4 @ 39 3/4
Monday.....	43 @ 43 1/4	38 3/4 @ 39 3/4
Tuesday.....	43 1/4 @ 43 3/4	39 3/4 @ 40 3/4

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	99 1/4 @ 99 3/4	1 04 1/4 @ 1 05 1/4
Friday.....	1 00 1/4 @ 1 00 3/4	1 05 1/4 @ 1 05 3/4
Saturday.....	1 00 1/4 @ 1 01 1/4	1 05 1/4 @ 1 06
Monday.....	1 02 @ 1 01 1/4	1 06 1/4 @ 1 05 3/4
Tuesday.....	1 02 1/4 @ 1 02 1/2	1 06 1/4 @ 1 06 1/2

## WHEAT.

An improved tone was manifested in the wheat market during a portion of the week, but it was confined mainly to the speculative side, and was not sufficiently pronounced to materially affect spot values. The number of ships lately added to the engaged list for wheat loading has been rather liberal, as compared with recent clearances, which would seem to indicate a fairly active movement outward in the near future and a good demand for wheat on export account. It is understood, however, that much of the tonnage recently engaged was secured for the purpose of taking wheat expected to be delivered on December contracts, the wheat being now piled up in 100-ton lots in Call Board warehouses. In the matter of wheat shipments from this port, November shows decidedly the best record of any month thus far the current season, twenty-five clearances having been made, aggregating 56,000 tons, representing a valuation of \$1,142,000. This is nearly double the quantity shipped during corresponding month last year, and is over a third of the total shipments of this season up to present date. Market closed rather firm at the quotations, with demand fair.

California Milling.....	1 02 1/4 @ 1 03 1/4
Cal. No. 1 shipping, alongside.....	1 00 @ 1 01 1/4
Oregon Valley.....	1 00 @ 1 02 1/4
Washington Blue Stem.....	1 00 @ 1 05
Washington Club.....	97 1/4 @ 1 01 1/4
Off qualities wheat.....	92 1/4 @ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	65 1/2 @ 65 3/4	68 00 @ 68 1/4
Freight rates.....	40 @ 42 1/4	34 @ 35 1/4
Local market.....	98 1/4 @ 1 01 1/4	1 00 @ 1 02 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, 99 1/4 @ \$1.02 1/4.
May, 1902, delivery, \$1.04 1/4 @ \$1.06 1/4.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.02 1/4 @ —; May, 1902, \$1.06 1/4 @ \$1.06 1/4.

## FLOUR.

Supplies are more than ample for immediate requirements, the demand not being particularly active, either for shipment or on local account. Sales effected are at generally unchanged values, but market does not show any special firmness. Buyers are in most instances restricting their purchases to present needs.

Superfine, lower grades.....	2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

The market has ruled rather quiet, values remaining quotably in about same position as for several weeks preceding. Barley is still being shipped to Europe and the East, but most of the barley going outward is from stocks which shippers have been carrying. Purchasing on local account is not active, either in brewing or feed descriptions. While offerings of barley are of fairly liberal volume, hold-

ers are as a rule not disposed to crowd stocks to sale, buyers finding it necessary in the majority of cases to pay full current rates, especially on desirable qualities.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	75 @ 82 1/4
Chevalier, No. 1 to choice.....	92 1/4 @ 1 00
Chevalier, poor to fair.....	75 @ 85

## OATS.

There are no heavy quantities offering of any description, and not likely to be in the near future. Market is moderately firm at the prevailing rates. Red oats have been lately receiving the bulk of attention, with good demand for seed, and in a small way desirable seed qualities have been commanding above quotations.

White Oats, fancy feed.....	1 25 @ 1 30
White, good to choice.....	1 20 @ 1 25
White, poor to fair.....	1 05 @ 1 15
Gray, common to choice.....	1 12 1/2 @ 1 25
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 25 @ 1 30
Black Russian.....	95 @ 1 20
Red.....	1 07 1/2 @ 1 25

## CORN.

Spot supplies are of very moderate proportions and include little which can be termed choice. Market for thoroughly dry corn favors sellers, but is dull and weak for damp and defective stock.

Large White, good to choice.....	1 40 @ 1 50
Large Yellow.....	1 25 @ 1 35
Small Yellow.....	1 45 @ 1 55

## RYE.

Demand is light, and prices keep at a low range. No great quantities of this cereal are ever consumed locally, and it is the exception where exports can be effected at other than low figures.

Good to choice, new.....	72 1/4 @ 77 1/4
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## BUCKWHEAT.

Recent transfers of this cereal, within range of values herewith quoted, have been of fair proportions.

Good to choice.....	1 60 @ 1 65
---------------------	-------------

## BEANS.

The market has been less active since last review than for several weeks preceding and has shown a little easier tone, more particularly for Lady Washingtons and Pinks, with offerings lately largely of these varieties. The previous urgent inquiry for Lady Washingtons was doubtless due to eagerness to cover on short sales for November delivery. With November closed, there is now no special haste necessary to make purchases on account of contracts. Market for Limas was slightly easier than last quoted, and trading was not active. Business in other beans not above named was of small compass and at much the same range of values as previously current.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	3 10 @ 3 30
Lady Washington.....	2 90 @ 3 10
Pinks.....	1 85 @ 2 05
Bayos, good to choice.....	2 35 @ 2 50
Reds.....	3 00 @ 3 25
Red Kidney.....	3 25 @ 3 75
Limas, good to choice.....	4 40 @ 4 50
Black-eye Beans.....	3 25 @ 3 75
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

Market is showing more steadiness, with lighter offerings and less selling pressure. Niles Peas continue to command, however, relatively the best figures.

Green Peas, California.....	1 50 @ 2 00
Niles Peas.....	1 60 @ 2 10

## HOPS.

There has been some inquiry for good to choice hops, but at a low range of values, bids over 11c. being the exception, and only for strictly choice stock was this figure obtainable. There are reports of some recent tolerably heavy purchasing having been done in the interior at 10 1/2c. on European account.

Good to choice, 1901 crop.....	10 @ 12
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## HAY AND STRAW.

The weather has been unfavorable during a great portion of the past week for the shipping and delivering of hay. As is generally the case under like conditions, the market has lacked firmness. Quotable values have continued, however, on much the same plane as during preceding week, and there is nothing to warrant anticipating any marked fluctuations in prices in the near future.

Wheat, good to choice.....	9 00 @ 12 00
Wheat and Oat.....	8 00 @ 11 00
Oat.....	6 50 @ 9 00
Barley and Oat.....	6 00 @ 8 50
Barley.....	6 00 @ 7 50
Volunteer.....	5 00 @ 6 50
Alfalfa.....	7 00 @ 9 00
Clover.....	5 50 @ 7 50
Stock.....	5 00 @ 6 00
Compressed.....	9 00 @ 12 00
Straw, 3/4 bale.....	35 @ 47 1/2

## SEEDS.

Mustard Seed is ruling steady. There

is not much now in stock of either Yellow or Brown. Flaxseed is arriving in considerable quantities from the North, representing in the main previous purchases or deliveries on contracts. Market for Bird Seed is quiet, values remaining unchanged.

Flax.....	Per ctt.
Mustard, Yellow.....	2 65 @ 3 25
Mustard, Trieste.....	3 25 @ 3 40
Mustard, Trieste.....	3 00 @ 3 15
Canary.....	3 1/4 @ 3 1/4
Rape.....	1 1/4 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/4

## LIVE STOCK AND MEATS.

Beef is in good request, with offerings only moderate and market tolerably firm at rates current. Mutton is not arriving in excessive quantity and values are being well maintained at the range below noted. Lamb is selling to very fair advantage, quotable values continuing the same as preceding week. Veal is bringing good average prices, there being no surfeit of offerings. Hogs have been selling at 1/2 @ 1/3c. decline from last quoted figures, but that there will be any great or prolonged weakness developed is not anticipated.

Beef, first quality, dressed, net 1/2 lb.....	6 1/4 @ 7
Beef, second quality.....	6 1/4 @ —
Beef, third quality.....	6 @ —
Mutton—ewes, 6 1/2 @ 7c; wethers.....	7 @ 8
Hogs, hard grain fed, 150 to 250 lbs.....	5 1/4 @ 5 1/2
Hogs, small, fat.....	5 1/4 @ 5 1/2
Hogs, large, hard, over 250 lbs.....	5 1/4 @ 5 1/2
Hogs, country dressed.....	6 1/4 @ 7
Veal, small, 1/2 lb.....	7 @ 9
Veal, large, 1/2 lb.....	8 @ —
Lamb, spring, 1/2 lb.....	8 @ 8 1/4

## POULTRY.

The market since last review has been rather quiet, a condition of affairs not unusual immediately after Thanksgiving week. Arrivals were not especially heavy, however, and choice stock met as a rule with a fairly good market. Dressed Turkeys were in very moderate receipt and no trouble was experienced in securing custom at full current values for offerings in fine condition. The demand for Young Chickens which were plump and fat was sufficient to absorb all offerings of this description.

Turkeys, dressed, choice.....	17 @ 18
Turkeys, alive, Hens, 1/2 lb.....	14 @ 15
Turkeys, alive, Gobblers, 1/2 lb.....	14 @ 15
Hens, California, 1/2 dozen.....	3 50 @ 4 50
Roosters, old.....	4 00 @ 4 50
Roosters, young (full-grown).....	4 00 @ 4 50
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 50 @ 4 00
Broilers, small.....	3 00 @ 3 50
Ducks, old, 1/2 dozen.....	3 50 @ 4 00
Ducks, young, 1/2 dozen.....	4 00 @ 5 00
Geese, 1/2 pair.....	1 50 @ 1 75
Goslings, 1/2 pair.....	1 75 @ 2 00
Pigeons, old, 1/2 dozen.....	1 00 @ 1 25
Pigeons, young.....	1 75 @ 2 00

## BUTTER.

Further cuts have been made in prices for fresh product since last review, with market weak and unsettled. Much of the butter now coming forward is showing poor keeping qualities, and this operates decidedly against its advantageous sale. Prices are expected to drop still lower in the near future.

Creamery, extras, 1/2 lb.....	23 @ —
Creamery, firsts.....	20 @ —
Creamery, seconds.....	19 @ —
Dairy, select.....	20 @ —
Dairy, firsts.....	18 @ —
Dairy, seconds.....	17 @ —
Mixed store.....	13 @ 14
Creamery in tubs.....	19 @ 21
Pickled Roll, 1/2 lb.....	19 @ 20
Firkin, California, choice to select.....	18 @ 20
Firkin, common to fair.....	16 @ 17 1/4

## CHEESE.

Mild new of high grade is arriving very sparingly, and for this sort the market is tolerably firm, with sales at an advance on quotations, mainly in a small way to special custom. Old cheese is in light supply and fair request at steady values.

California, fancy flat, new.....	12 @ 13
California, good to choice.....	11 @ 12
California, fair to good.....	— @ 11
California, "Young Americas".....	12 1/4 @ 13 1/4

## EGGS.

Prices for fresh have declined, due to increased offerings and inability of receivers to keep stocks cleaned up at the comparatively stiff figures which have been lately current. Buyers have little or no faith in the future of the market, and are operating slowly, marked concessions in their favor proving no inducement for them to take hold heavily. Cold storage eggs are still in liberal supply and are being crowded to sale.

California, select, large, white and fresh.....	35 @ —
California, select, irregular color & size.....	30 @ 40
California, good to choice store.....	25 @ 30
California, common to fair store.....	— @ —
Eastern, good to choice.....	22 1/4 @ 27 1/4
Cold Storage.....	20 @ 25

## VEGETABLES.

The tendency of the market for most kinds of vegetables now in season was in favor of the selling interest, unless the

quantity was at fault. Onions were very steadily held at below quoted range, but did not move freely at full current figures. Green Peas and String Beans were in very limited receipt and choice met with a decidedly firm market. Tomatoes showed more or less damage from rain and defective stock moved slowly at low values. Green Peppers were in fairly liberal supply and went in the main at quite reasonable figures.

Beans, String, 1/2 lb.....	3 1/4 @ 6
Beans, Lima, 1/2 lb.....	3 1/4 @ 5
Cabbage, choice garden, 100 lbs.....	40 @ 50
Cauliflower, 1/2 dozen.....	40 @ 50
Cucumbers, Bay, 1/2 large box.....	50 @ 1 00
Egg Plant, 1/2 box.....	40 @ 60
Garlic, 1/2 lb.....	2 @ 2 1/4
Mushrooms, 1/2 lb.....	10 @ 15
Onions, Yellow Danver, 1/2 cental.....	1 75 @ 2 25
Peas, Sweet garden, 1/2 lb.....	4 @ 6
Peppers, Green Chile, 1/2 sack.....	35 @ 50
Peppers, Bell, 1/2 box.....	40 @ 65
Squash, Marrowfat, 1/2 ton.....	8 00 @ 10 00
Summer Squash, Bay, 1/2 large box.....	75 @ 1 00
Tomatoes, 1/2 large box.....	40 @ 75

## POTATOES.

The market has not shown much life, most of the shipping trade which had been coming here having been diverted to other points, where freight rates and prices for potatoes footed up more favorable to outside buyers than at this center. Values have been fairly well sustained here, however, from the fact that most of the potatoes now held in this center are in second hands and cost close to present quotations.

Burbanks, Salinas, 1/2 100 lbs.....	1 30 @ 1 60
River Burbanks in sacks, 1/2 cental.....	90 @ 1 10
Petaluma and Tomales Burbanks.....	1 10 @ 1 30
Oregon Burbanks.....	1 25 @ 1 50
River Reds.....	1 30 @ 1 50
Sweets, Merced, 1/2 cental.....	70 @ 85

## The Fruit Market.

### FRESH FRUITS.

There is very little choice to select fresh deciduous fruit of any variety now on market, and such is commanding good prices, while seriously defective stock is not specially sought after, even at seemingly low values. The better class of consumers, those who pay the best figures, will not put up with inferior qualities. Rather than take seriously faulty fruit, they will go without. High grade fruitier Apples, such as select Spitzenberg, are commanding up to \$2 per box and even higher in a small way, with not the slightest probability of the market being overstocked this season with fruit of this description. Winter Nells Pears which are large and perfect are salable to about as good advantage as fancy Apples. Pomegranates are still on market and were offered at \$1.25 per box, but the season for them is about ended. Grapes were mostly more or less rain-damaged, and on this account moved slowly, but choice were inquired for and buyers were willing to pay good figures. Strawberries were in light receipt and included few which were choice, the latter bringing tolerably stiff prices. Raspberries and Blackberries made a moderate showing and sold at about same figures as previous week.

Apples, fancy, 4-tier box.....	1 50 @ 2 00
Apples, good to choice, 50-lb. box.....	1 00 @ 1 50
Apples, common to fair, 50-lb. box.....	40 @ 75
Apples, Lady, 1/2 box.....	1 00 @ 2 00
Blackberries, 1/2 chest.....	5 00 @ 7 00
Grapes, 1/2 crate and small box.....	40 @ 75
Grapes, large open boxes.....	1 00 @ 1 25
Pears, Winter Nells, 1/2 40-lb. box.....	1 25 @ 1 75
Pears, other kinds, 1/2 box.....	50 @ 1 00
Persimmons, 1/2 box.....	40 @ 75
Pomegranates, 1/2 box.....	65 @ 1 25
Raspberries, 1/2 chest.....	5 00 @ 7 00
Strawberries, Longworth, 1/2 chest.....	11 00 @ 12 00
Strawberries, Large, 1/2 chest.....	4 00 @ 6 00

### DRIED FRUITS.

Market for cured and evaporated fruits has shown few changes in quotable rates since last review. As previously stated, there is little in this line offering at present from first hands other than Prunes. The Cured Fruit Association is reported to have closed out in one deal its entire holdings of old Prunes, somewhere between 20,000,000 and 30,000,000 lbs., at terms reserved. These Prunes are now being gotten ready for shipment. Some transfers of new Prunes are also reported, mainly for shipment to Europe, but at no improvement on previously quoted values. There is a firmer tone, however, and it seems clearly established that prices have touched bedrock. Should any changes be developed in quotable rates in the near future, they are almost certain to be to firmer figures. Apples continue in sellers' favor, with the output up to date practically all disposed of, and not many evaporated likely to be produced from this time forward. The season for sun drying is now over, and there are no evidences of any sun dried Apples of consequence now remaining in first hands. Figs are being firmly held, with stocks light, the season's pack proving much smaller than last year, owing to unfavorable weather while crop was maturing. In Apricots, Peaches,



Pears and Plums there is not much doing, but stocks are of small compass and are being held at quotably unchanged values, holders being confident of a demand later on sufficient to effect a clean-up. It is estimated that there are not to exceed 200 cars of Peaches and about 100 cars of Apricots remaining in the State. Of Pears and Plums combined it is doubtful if there are now to be found 100 cars in all hands.

#### EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 @ 7½
Apricots, Royal, choice, in sacks, ½ lb..	8 @ 8½
Apricots, Moorpark.....	10 @ 12½
Apples, in 50-lb boxes, rings, pressed, fancy.....	8 @ 8½
Apples, 50-lb boxes, rings, pressed, good to choice.....	6½ @ 7½
Figs, pressed.....	6 @ 7
Nectarines, ½ lb.....	5 @ 6½
Peaches, unpeeled, fancy.....	7 @ 7½
Peaches, unpeeled, choice.....	6 @ 6½
Peaches, peeled, in boxes.....	12 @ 14
Pears, halves, choice to fancy.....	6 @ 8½
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	5 @ 6
Prunes, 4 sizes, in bags, 2½@3c; 50-60s, 3¼@4c; 60-70s, 3¼@3½c; 70-80s, 2¾@3c; 80-90s, 2¼@2½c; 110s and less, 1¾@2c; these figures for 1901 crop.	

#### COMMON SUN-DRIED.

Apricots.....	6 @ 6½
Apples, sliced.....	3 @ 5
Apples, quartered.....	3½ @ 4½
Figs, Black.....	3 @ 3½
Figs, White.....	3¼ @ 3½
Peaches, unpeeled.....	5 @ 6
Pears, prime halves.....	5 @ 6
Plums, unpitted, ½ lb.....	1¼ @ 2½

#### RAISINS.

As for several weeks past, the movement in Raisins is mainly in 3-crown seeded, with prices for same fully as favorable to buyers as at any previous date this season. There are few other than 3-crown now offering. The Raisin Growers' Association is advancing the same figure on late as on early deliveries.

Following are the prices for new crop, as fixed by the Fresno Association:

Loose Muscatels—	Per lb.
4-crown.....	4½
3-crown.....	4½
2-crown.....	3½
Seedless Muscatels.....	4½
Seedless Sultanas.....	5
Thompson's Seedless.....	6
Bleached Thompson's—	
Extra Fancy.....	—
Fancy.....	10
Choice.....	9
Standard.....	—
Prime.....	—
Seeded—	
3-crown, 1-lb carton.....	5¼ @ 6¼
2-crown, 1-lb carton.....	5¼ @ 5¼
London Layers, 20-lb boxes—	
2-crown.....	1 10
3-crown.....	1 20
4-crown.....	—

#### CITRUS FRUITS.

The Orange market is weak and lower, with liberal offerings, and the quality as to ripeness showing considerable improvement over earlier receipts. Sales of Navels are mainly within range of \$1.50@2.25 per box, a few fancy going a little higher, and some undesirable stock selling under inside quotation. Lemon market is showing a little more firmness for best qualities, with asking rates advanced about 25c. per box, but lower grades are cheap as ever and slow of sale. Limes have been marked down, stocks being large.

Oranges—Navels, ½ box.....	1 25@2 25
Seedlings, ½ box.....	1 00@1 50
Tangerines, ½ box.....	1 00@1 25
Lemons—California, select, ½ box.....	2 50@
California, good to choice.....	1 75@2 25
California, common to fair.....	1 00@1 50
Grape Fruit, ½ box.....	1 25@2 25
Limes—Mexican, ½ box.....	4 00@

#### NUTS.

The Almond market is without appreciable change, except that shelled are offering at a wider range, with market for other than choice to select favoring buyers. Shelled which are broken but are fairly plump and of good flavor are being offered from second hands at 15c. Considerable doing in Walnuts, but much of the business is at less than Association figures. Jobbers have been securing No. 1 soft shell in carload lots at 8½c. Peanuts are meeting with moderate custom at quotably unchanged values.

California Almonds, shelled.....	15 @ 18
California Almonds, paper shell, ½ lb.....	10½ @ 12
California Almonds, soft shell.....	7 @ 9
California Almonds, hard shell.....	5 @ 6
Cal. White Walnuts, No. 1 soft shell.....	8½ @ 9½
Cal. White Walnuts, No. 2 soft shell.....	6½ @ 7½
Cal. White Walnuts, No. 1 hard shell.....	8 @ 9
Cal. White Walnuts, No. 2 hard shell.....	6 @ 7
Cal. Chestnuts.....	7 @ 10
Peanuts, California, fair to prime.....	4½ @ 5½
Peanuts, Eastern, hand-picked.....	5½ @ 6
Pine Nuts.....	5 @ 6

#### WINE.

There is virtually nothing doing in a wholesale way in wines, owing to absence for the time being of noteworthy offerings. Last season's product is about out of first hands, and this year's wines are not yet ready for market. Quotable values remain nominally as previously

noted, viz.: 25@30c. per gallon wholesale for dry wines of 1900 vintage, with selections salable up to 35c. in a jobbing way. The prospects are that the wholesale market for this year's dry wines will open at 20@25c. per gallon for fair to choice.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, ½ sacks.....	88,805	2,780,016
Wheat, centals.....	104,660	3,212,059
Barley, centals.....	26,380	3,769,618
Oats, centals.....	7,320	547,669
Corn, centals.....	3,245	34,598
Rye, centals.....	1,720	53,478
Beans, sacks.....	31,308	488,270
Potatoes, sacks.....	45,245	669,280
Onions, sacks.....	1,051	130,185
Hay, tons.....	2,605	70,801
Wool, bales.....	925	39,083
Hops, bales.....	...	5,025

#### EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, ½ sacks.....	40,784	2,057,042
Wheat, centals.....	148,321	2,824,340
Barley, centals.....	112,390	2,913,052
Oats, centals.....	...	2,119
Corn, centals.....	...	8,663
Beans, sacks.....	219	16,639
Hay, bales.....	20	4,960
Wool, pounds.....	...	511,316
Hops, pounds.....	35,126	303,446
Honey, cases.....	30	4,497
Potatoes, pack's... ..	18,494	43,625

#### California Dried Fruit at New York.

NEW YORK, Dec. 4.—Evaporated apples, common, 6@8½c; prime wire tray, 9@9½c; choice, 9½@9¾c; fancy, 10@10½c.  
California Dried Fruits.—Market quiet, with values fairly steady.  
Prunes, 3¼@7c.  
Apricots, Royal, 9½@13c; Moorpark, 10@14c.  
Peaches, unpeeled, 7@10½c; peeled, 11@16c.

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# A Pure, Clean, Strong, Lining.

P & B building paper is a clean and absolutely inodorous lining for the insulation of refrigerators and cold storage rooms. It is light in weight, easy of application and not liable to spontaneous combustion, nor will it attract moisture and decay.

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5-FOOT. WEIGHT, 300 LBS.  
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Car Lots a Specialty. Send Samples.  
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**OPTICIAN.**

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We still have a few army hatracks, the newest articles invented, which are selling for \$3.00 apiece. Your money back on anything you don't want.

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Remittances Made at Once.  
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Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief if any.

### Corn Stalk Disease.

A. W. Bitting, veterinarian of the experiment station at Lafayette, Indiana, says that this term is applied to a disease or possibly several diseases occasioned as a result of pasturing cattle in stalk fields late in the fall or early in the winter. An outbreak, if one should occur, usually takes place in from two to fourteen days after the animals are turned upon the stalks. The great majority of cases occur between the fifth and the eighth days. It is also observed that all animals that do become affected die within two or three days of each other. There is nothing in the appearance of the fodder to indicate that it may cause trouble. Cattle may graze and do well on one field and from 10% to 15% be lost on changing to another field separated from the first by a fence. It makes no difference whether the cattle are allowed to graze for only a few hours or left in all day. After one outbreak has occurred it is rarely the case that a second will follow. The disease has never been reported from

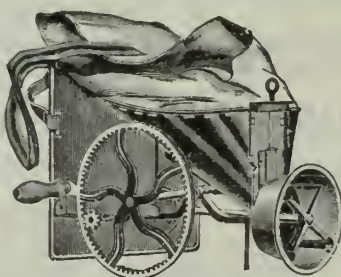
feeding cut fodder, even when taken from the same field as that in which the disease has occurred from grazing. The cause has never been determined, but it is most often observed after a dry season.

The general symptoms are that the animal appears dull, persists in standing in one place, or if he moves it is with a noticeably jerky gait. There is marked prostration. The animal will fall on the knees and it may require several attempts to arise. Some act as though they were crazy, but the majority are stupid. There is more or less frothing at the mouth and almost constant swinging of the head from side to side, whether in the standing position or lying down. The movements are indicative of pain. The course is of very short duration—from two to thirty hours—the majority living less than six hours. Too often the history is that the cattle were all right in the evening and from one to eight found dead in the morning. As the cause is not known, and a successful treatment has not been discovered, the prevention or means of relief can not be prescribed except by using cut fodder.

### England Buying American Watches.

Recent cables from London announce the sale of two million American watches by Robt. H. Ingersoll & Bro., watch manufacturers of New York City, the largest order ever given for watches. This sale was made in competition with the factories of Europe, where cheap labor has heretofore made it difficult for American watch manufacturers to compete. In this case, however, it was superior quality as well as lower price that decided in favor of American ingenuity and skill. The entire order was given for one particular grade, the Ingersoll Dollar watch. A test order for two hundred and fifty thousand of these watches was placed a year ago by this London firm, and the order this year for two million is the harvest the Ingersoll Brothers reap from the good seed sown. They are now turning out over 6000 of these watches daily. To visit their factory and see the ingenious automatic machinery attended by three thousand skilled employees, turning out every part of the watch with mathematical accuracy, one can then understand the secret of the success of this watch.

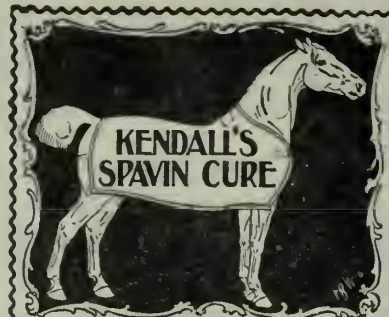
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When Noah Webster set about compiling an American dictionary of the English language he did better even than he expected. He did a great deal to make possible the present purity and high standard of the language used in the United States. From time to time his original work has been revised and enlarged by hands even more competent than his own, till to-day in the form of Webster's International, to which has been added 25,000 new words, bringing it thoroughly up to date, it easily stands at the head of recognized lexicons, as is attested by testimonials from eminent scholars, statesmen, diplomats, judges and authors throughout the world. In purchasing this up-to-date volume for the home, school or office you may be sure you are getting not only the latest but the best.



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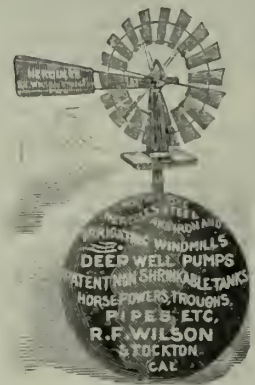
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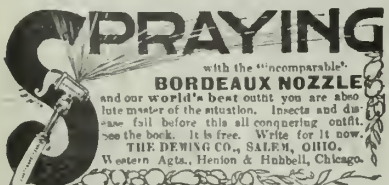
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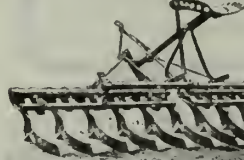


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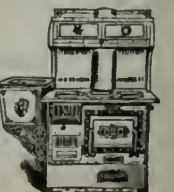
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This is in the form of a cord impregnated with the vaccine. Each dose is separate and applied with a special needle. The dose is hitched on to a notch in the needle and then inserted under the skin at the shoulder. The needle is provided with a detachable handle. Vaccination with "Blacklegine" is as rapid and easy as taking a stitch. There is no dissolving, or mixing, or filtering a powder; no injecting or trouble in measuring doses; no expensive syringe outfit.



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Prices: "Single Blacklegine" (for common stock): No. 1 (ten doses), \$1.50; No. 2 (twenty doses), \$2.50; No. 3 (fifty doses), \$6.00. "Double Blacklegine" (for choice stock) (first lymph and second lymph, applied at an interval of eight days), \$2.00 per packet of ten double doses. Blacklegine Outfit (handle and two needles), 50 cents.

**PASTEUR VACCINE COMPANY,**

Chicago, New York, Omaha, Kansas City, Ft. Worth, San Francisco.

## DIRECTIONS FOR SUCCESSFUL OLIVE PICKLING



**PLACE** olives in solution composed, 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove tartness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 6 oz. salt to gallon water for 7 days. Put in brine 10 oz. salt to gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles soaked in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

YOU MUST USE  
**RED-SEAL-LYE**

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THE THREE ESSENTIAL ELEMENTS OF PLANT FOOD.

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**HUGO.** REGISTERED NO. 9438. Weight 1800; bred by J. D. Patterson, Oxnard, Cal.; foaled April 18, 1898. Sire, Leopold 4250 by imp. Louis 3299; dam, Henrietta II 5779 by imp. Montebelle 3298; second dam, imp. Lady Henrietta I 2419.

**MARQUIS.** REGISTERED NO. 9017. Weight 1750; bred by J. D. Patterson, Oxnard, Cal.; foaled March 25, 1895. Sire, imp. Montebelle 3298 by Caesar; dam, imp. Maria I 2450 by Hercules.

These Stallions are first-class and their sires and dams are among the noted prize winners in Europe. For price and further particulars address AMERICAN BEET SUGAR CO., 123 California Street, San Francisco.

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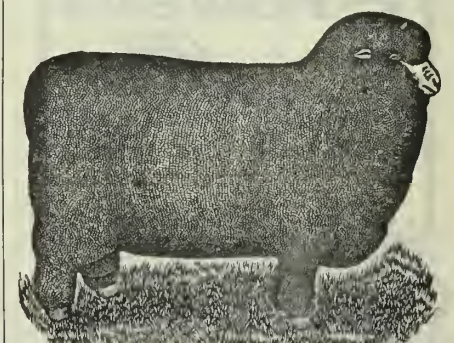
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### Oakland Grange.

To THE EDITOR:—Oakland Grange held a very enjoyable initiation and supper on Saturday, Nov. 16th, at I. O. O. F. Hall, at which the first and second degrees were conferred on Mrs. Wheat and the third and fourth degrees on Miss Bacon, Mr. and Mrs. Dow and Mr. Wheat in an able manner by our Overseer, Dexter Gilbert, our Master being absent in the East in attendance at the National Grange. Afterwards the following programme was ably rendered: Piano duet, Misses Bacon and Dewey; recitation, Mrs. Dow; vocal solo, Mrs. Wheat; recitation, Mrs. Miller.

We all then repaired to the banquet hall, where a sumptuous repast had been prepared under the supervision of Mrs. Fowler, which consisted of all the delicacies of the season, including Belgian hare and pumpkin pies.

The after-dinner speeches were exceedingly humorous and to the point, and included several bear and fish stories.

Our annual election of officers will be held at our next meeting. NITA.

Oakland.

### FLEMING BROS.' STOCK REMEDIES.

Fleming Bros., Union Stock Yards, Chicago, believe in a separate remedy for each class of disease they treat. They claim that the Lump Jaw cures Lump Jaw, the Spavin Cure cures Spavin and the Fistula and Poll Evil Cure cures these diseases. This Fleming Bros. assert, and offer to refund all money paid if their medicine fails to cure. They say that so nearly universal is their success, that their refunds under the guarantee average only two-thirds of one per cent. If this is so, out of 300 cases they cure 200 cases. If you own a lumpy jaw cow or steer, a horse with fistula or poll evil, or have horses with spavins, curbs, ringbones, splints or any extraneous bony formations, write Fleming Bros. for full information and a pamphlet with testimonials of cures, mentioning catalogue No. 96 if you want to know about the spavin remedy and catalogue No. 217 if for lumpy jaw.

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T. H. GOODMAN,  
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### Fertilizing Sugar Cane.

We have received a little pamphlet entitled "Fertilizing of Sugar Cane in the Hawaiian Islands," by Prof. J. T. Crawley, formerly of the U. S. Department of Agriculture in Washington. The cane-sugar industry has reached its highest development in Hawaii, leading all countries in perfection of methods and in yield of sugar per acre, and for this reason the subject treated in the pamphlet is one of general interest. The pamphlet will be sent free to all interested who apply for it to the German Kali Works, 93 Nassau St., New York.

IN 1861 the Government equipped the United States army with the Maynard carbine, at a cost of \$18 apiece. This gun was the lightest and best cartridge gun used by our soldiers in the Civil War. Mr. Kirk of 517 Market street, San Francisco, purchased 6000 of them from Benicia Arsenal which had never been used and were guaranteed to be in prime order. They are placed on sale at \$1.75 and 20 cartridges thrown in. He says that for hunting, sporting, target shooting or defense they equal the most modern rifles. There is also on sale, at \$3, a useful and ornamental hatrack, made from a Mississippi rifle—Mr. Kirk's own invention. For Christmas presents these articles would be appreciated.

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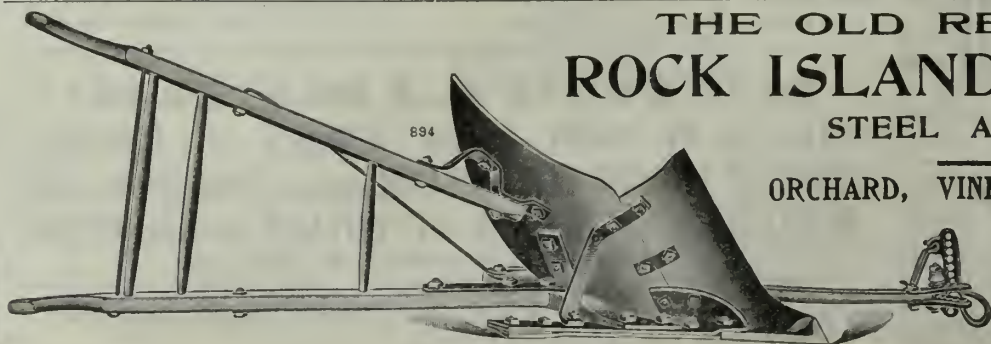
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## PATENTS

Our U. S. and Foreign Patent Agency presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, our Washington branch which tends exclusively to our business before the Patent Office, intimate acquaintance with the subjects of inventions in our own community, and our most extensive reference library, containing official American reports since 1790, with full copies of U. S. Patents since 1872. All worthy inventions patented through DEWEY, STRONG & CO.'s Patent Agency will have the benefit of a description in the *Mining and Scientific Press*. We transact every branch of patent business, and obtain patents in all countries which grant protection to inventors. The large majority of U. S. and foreign patents issued to inventors on the Pacific Coast have been obtained through our agency. We are conservative and counsel preliminary examinations in cases of doubtful novelty. Guide to inventors sent on request.

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The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

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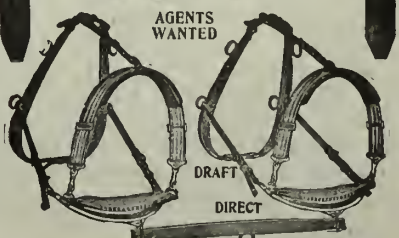
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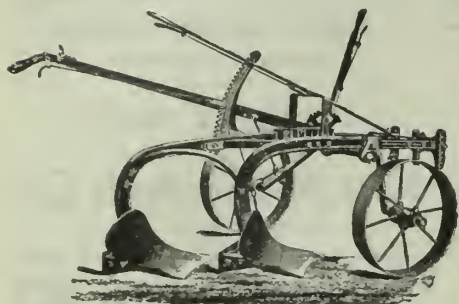


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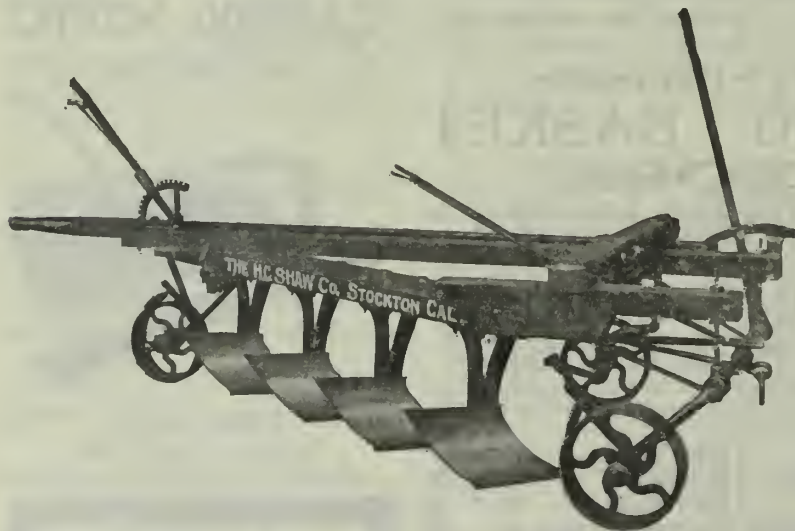


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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 24.

SAN FRANCISCO. SATURDAY, DECEMBER 14, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### An Up-to-Date Packing House.

The development of the California fruit specialties has been attended by notable achievements in constructions, inventions and systems particularly designed to prepare the product for transportation and market in the best form and in the most economical way. It seems to be conceded that California leads in this advanced work. It is fair to infer this from the fact that those who visit foreign ports find nothing for us to imitate except in the preparation of extra fancy fruit in small, artistic packages for the highest priced trade. How far such effort would pay is an undetermined matter and can be experimented with at leisure; meantime it is comforting to know that in handling the main crops in immense quantities California has no superior abroad. It is fair to infer that we are also excelling our Eastern fruit growing friends in style and system, because there is hardly an assembly at the East where the local experts do not scold their hearers for not packing as well as the California shippers do. This local excellence in handling fruit products is essential to success. We could not have achieved present volume of shipment without it; we cannot further advance as we should without continually striving for still greater style, uniformity and economy.

California has devised new methods and appliances for handling nearly all kinds of fruit and fruit products; but with no class of fruits have the arrangements attained higher excellence and efficiency than the citrus fruits. The southern California packing houses came first to notable extent and superior character, and they are now to be found thickly clustered around the railway stations in all the citrus districts. More recently similar establishments are being provided in the newer citrus districts of central California, and some of them show in their later construction the advantage of the opportunity of improving upon the older designs and arrangements. As the production increases both north and south, the best will prevail everywhere, for California fruit growers and shippers manifest a clear purpose to be up to date. They recognize it as a condition of success.

On a previous occasion we gave an interior view of one of the creditable packing houses in southern California. We have on this page a very spirited view of one of the newest and best to be found in the central part of the State. It was recently built by Mr. William Calder at Orangevale, near Folsom, in Sacramento county. Mr. Calder is an extensive orange

grower in that district, and found it desirable last year to pack his own crop, and included some of his neighbors' products also. He operated with limited facilities, but with such success that he felt warranted in securing the best arrangements for this year. He made an extended tour of observation among the largest packing establishments in southern California, noting carefully their most important features of construction and modern equipment, and these he has aimed to embody in his new plant, so far as his own experience led him to believe them desirable under his local conditions.

Our engravings give a very good view of the new

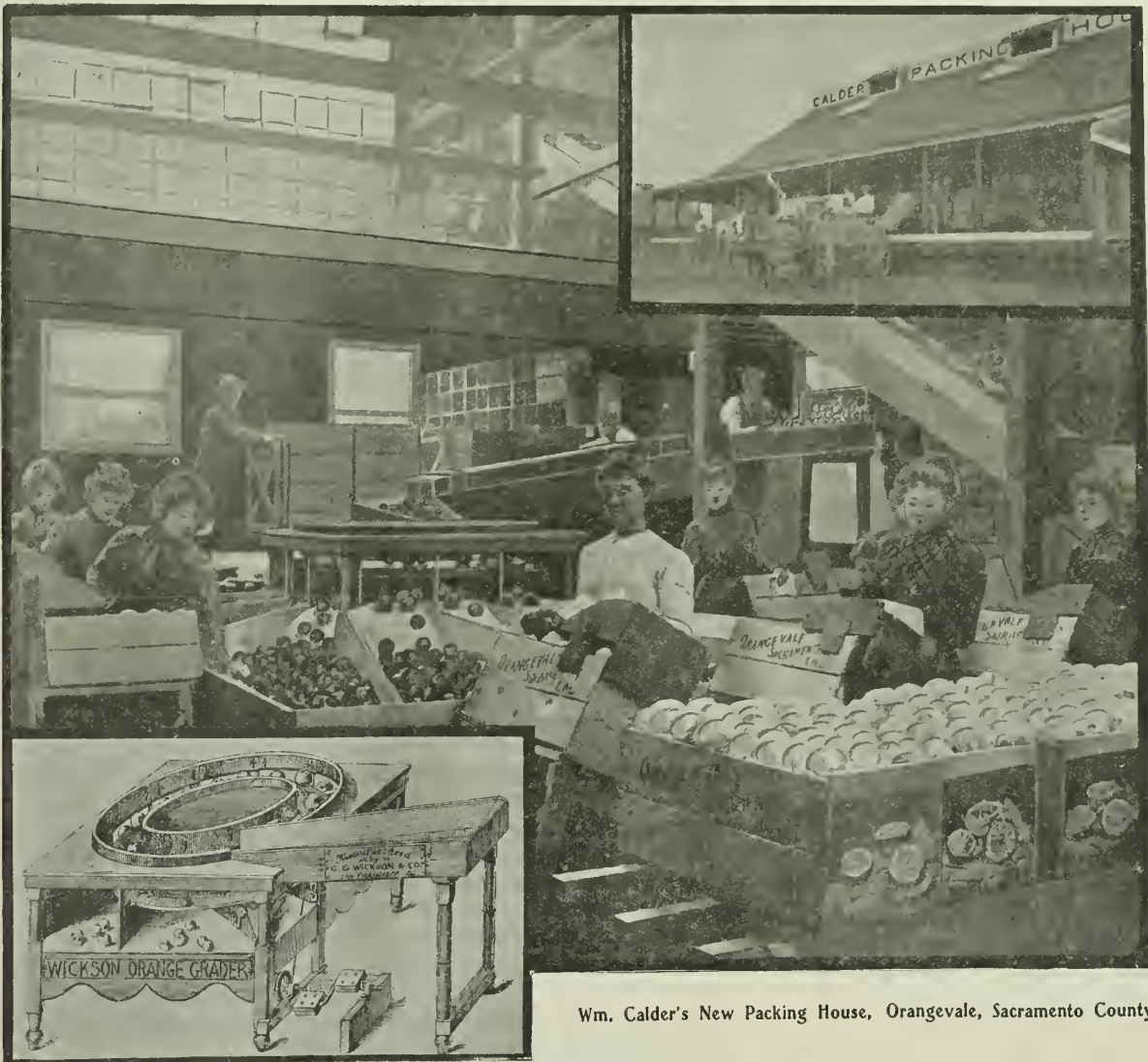
eral form. It has a revolving circular platform, and other arrangements so that the fruit cannot escape movement to its proper place, and its compactness and method of delivery of the different sizes makes the packing arrangements very convenient. The grader is largely the invention of Mr. R. G. Bailey, improvements having been added by experience so that the machine has passed its experimental stage. In Mr. Calder's packing house both the brusher and the grader are driven by a water motor situated under the main floor.

Other arrangements of the interior are very interesting, particularly, perhaps, to readers who have

never seen the interior of such an establishment. The oranges are seen rolling from the grader to the hands of the elegant ladies who are to be found in such large numbers in California packing houses. The fruit is seized with one hand, while the other quickly brings an orange "wrap" of tissue paper from the shelf which is seen supported on the end of each box in the picture. The fruit is enclosed in its soft covering and pushed at once into place. Hands of quick packers almost seem to fly. As the boxes are filled they are lifted to the rack seen in the foreground, whence they are taken on a truck around to the press, near the entrance, where the nailer forces the fruit down so closely that it cannot move in transit, and yet so gently that it is not crushed, and nails the cover and the leveling strips in place. The spring in the bending cover takes up any decrease in the bulk of the contents, and keeps

the fruit firmly in position. After nailing and labeling the boxes are ready for loading for shipment. Thus the fruit has made the circuit of the house. Entering in the picking box, passing the brush, the grader, the girl and the nailer, it comes at last in its neat wrapper and its highly illuminated box to minister to the comfort and win the admiration of dwellers in distant parts of the world.

THE Petaluma people are protesting against the shipping of superannuated horses to that town for use of adjacent chicken feeders. They had a discussion lately before the county supervisors as to means to prevent diseased animals being used for chicken feed, and also to prevent the spread of infectious diseases throughout the county. The board took the matter under consideration pending an investigation as to their lawful authority in the premises. They expect a communication from the State Board of Health, making recommendations, as the State Board sent Dr. Fay of Sacramento to investigate the evil.



Wm. Calder's New Packing House, Orangevale, Sacramento County.

establishment. In the upper right hand corner a glimpse at the exterior of the building is given, showing the delivery from the orchard wagons to the covered platform. Just below, in the larger picture, is seen the receiving door of the packing house, as it appears from the inside. One of the picking boxes from the wagon is being emptied into the receiving chute of the brushing machine, and the man is seen quickly removing the blemished, or otherwise undesirable fruit, so far as it can be described at this point. The acceptable fruit moves along into the brushing machine which frees it from dust, etc., and then is seen near the center of the picture rolling into the feeder of the grader in which it is quickly assorted into sizes—each segment of the revolving grader delivering its own sized fruit to the bins which are right at the hands of the packers. The grader is a new one, which was introduced last year by G. G. Wickson & Co. of this city, and was so strongly approved that Mr. Calder made all his arrangements upon the basis of the use of this grader. A small picture in the lower corner shows its gen-



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E. J. WICKSON.....Horticultural Editor.

San Francisco, December 14, 1901.

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## The Week.

A bracing sharpness has come to the atmosphere since the rains of last week, and frosts are making records at various points. Only the citrus fruits are now under the sky, excepting, of course, the early vegetables which are growing for Christmas week. If these can be saved by co-operative firing or by the thermal character of their situations, the rest of the State will not object to microbe killing and other beneficent deeds of the frosts. The rains have been ample for present use except, perhaps, in the extreme south, and all work is being pushed to reach its utmost limit before the holiday intermission.

Wheat has been very lively since our last report and, though it has dropped 3 cents from its highest reach, it still finishes 2½ cents per cental in advance of the price of a week ago. This was chiefly in options. Spot wheat has not shown so much agility and falls more slowly. The foreign markets are firmer, but the advantage seems to be coppered by the ship grabbers, for the "big four" are reputed to have chartered everything in sight, and thus control the situation. Four ships have gone out, taking 8500 tons. Barley is firmer, especially for the more desirable sorts of feed barley, and such have advanced about 50 cents per ton. A lot of 100 tons of brewing has gone to New York by steamer. Oats are very firm and some kinds are higher. Corn is unchanged. Rye is more firmly held. Mustard has been moving out well and yellow is firmer; about twelve tons recently went by steamer to New York. Beans are slightly changed, for though pinks are firmer whites are being talked down. Bran is unchanged, quiet and not much is wanted. There is a little weaker feeling in stable hay, but cow hay has slightly improved. Beef is higher and mutton firm, but large and medium hogs are lower, while small hogs are higher. Arrivals of all kinds are quite free. Butter is weak and dragging and irregular in price; some packing is even now being done to steady things. Cheese is weak, except for select new. There is a good deal of held cheese both California and Oregon, and low-grade Eastern is too abundant, though fancy is scarce. Eggs are tumbling and stored eggs are rolling out as fast as possible. Poultry is firm for nice young chickens, but otherwise rather weak. Turkeys are just now slow and lower. Potatoes are still being taken on speculation, though there is no outward movement except to Asia. Onions are steadily held, but the demand is not sharp. Fine apples are scarce and high. Oranges are lower and dragging, but there are very few fine oranges here. The auction sales are promised to begin next week. Lemons are cheap, and few fine in sight. Prunes are active; half a million pounds have gone to New York by steamer. There seems to be active demand for old prunes at 2¼@3c and for new at 3@3¼c. Trade in nuts is active, but prices are unchanged. They promise to clean up well.

## The Fruit Growers' Convention.

The Fruit Growers' Convention continued its work diligently after our last issue went to press. On Thursday three sessions were held, covering twelve hours time with about four hours intermissions—thus doing a good legal day's work of eight hours. On Friday the assembly was busily engaged until the evening twilight, when a final adjournment was taken.

On the whole, the convention was very interesting and successful. It lacked, perhaps, a little of the snap and spirit of the meeting of last year and there were fewer dramatic situations. It was a serious, well-behaved and industrious assembly, better, on the whole, at listening than at talking, and content to vote heavily on the affirmative side of all questions brought forward. It was good for those who attended and good also for the advancement of the interest generally, for the tone of all transactions was hopeful and encouraging.

We shall occupy our columns from week to week in the publication of the papers presented at the convention which seem to us to contain the most widely interesting propositions and details. Some other leading matters, concerning which the reader may prefer the conclusion rather than the detail, may be briefly summarized.

The transportation question, which used to be an exciting issue in fruit conventions, is becoming as soporific as the droning discussions on the blessed bugs. The railways are behaving so much better nowadays that it does not seem to be right to continue the annual trouncing. They are really trying to do just as well as they can and they send a very pleasant gentleman to the meetings to give lessons in primary railroading—as to how the lazy engine builders do not deliver their goods at promised times and how the bad Eastern partners have to be punished for not running at the promised speed. This is all very interesting and the best of it seems to be that it is true, for those who had most to do with shipping fresh fruit this year seemed to be quite content with the improvements which are entering into the service. Mr. R. D. Stephens of Sacramento, chairman of the committee on transportation, claimed that the railroads were behaving very well, but that the refrigerator car monopoly was the bane of the California fruit grower. He was emphatic in his declarations against the refrigerator car monopoly of the Armours and the large profits made by it. He thought the railway company ought to own the cars. If refrigerating rates were reduced one-half, Mr. Stephens thought, the growers would be satisfied to allow Southern Pacific rates to remain as they are. He thought it would be a positive wrong for the convention to adjourn without taking some action against this refrigerating monopoly.

How much better the northern growers are circumstanced was shown by Mr. A. N. Judd of Watsonville, who called attention to the advantages the fruit growers of Oregon and Washington were given by the railroads over the California growers. "Instead of paying \$36 a car for refrigeration," he said, "the cost is \$10.17, and no charge is made for icing. While we are 200 or 300 miles nearer the East than they, the railroads carry their fruit over two ranges of mountains at \$1 a hundred." He spoke at length of the low freight charges in Washington and Oregon as compared to those of California, and moved that the committee on transportation, at the next annual meeting, report relatively the rates railroads of other States give the producer. This was agreed to.

Co-operation on fruit marketing was another subject on which there was talk beyond our power to print, even though the Prune Association allowed its time on the programme to be defaulted by absence. We alluded last week to the stirring remarks of Mr. Naftzger and Mr. Jacobs. Much interest was manifested in the account of the work of the California Fresh Fruit Exchange, which was read by A. R. Sprague of Sacramento. Mr. Sprague said in part:

The exchange was organized only a year ago and was unable to begin operations until the shipping season was at hand. Subordinate local organizations were organized in the height of the season at a few important places of shipment—among others, Loomis, Penryn, Newcastle and Rumsey. Time did not permit organizations at other places, but carload ship-

ments were also made from Sacramento. The business of the exchange up to Nov. 1st amounted to \$208,000, which was done at a total cost, including every expense, of \$14,000 in round numbers, including funds now on hand. About 208 full cars were shipped East and sales were made in thirty-eight different cities, the chief distributing centers of the United States and Canada. We have refunded to one of our local associations \$2900, the proceeds of savings in purchase of supplies and of charges for car loading; proportionate amounts were refunded to other smaller associations. We have not lost a dollar from bad debts. Our members who have shipped with us for the whole season quite unanimously agree that they have received a net amount for their fruit considerably greater than their neighbors, who shipped through commission firms or who sold for cash in the best cash markets.

A little difference of opinion as to policy cropped out in connection with a discussion by Mr. M. Theodore Kearney of Fresno of the needs of success in co-operation. Mr. Kearney held that one of the greatest needs was to secure a way of holding members up to their obligations. "The growers," he said, "as a whole will not keep within them, unless they are forced to. They cannot be held together on honor and sentiment alone." Mr. Kearney's views were questioned by other delegates, among them Dr. Sherman of Fresno, and Mr. Naftzger of Los Angeles scouted the whole idea of forcing people to stay in. If they did not desire to stay in he would help them out and show them what a mistake they had made in retiring. The difference of opinion harks back to the fundamental difference in the marketing plans north and south. The north has undertaken to control the product and fix the price; the south does not undertake to fix price but to push everything into sale at what it will bring. But there are different conditions and different products north and south, and the whole affair is not as easy as it might appear. There is much in it still to be threshed out.

In the convention the question finally took the form of a closely contested issue as to whether the California Legislature should be memorialized to provide a way in which producers can be legally held to contracts which they make with combinations of agricultural producers. It was finally decided to commit the propositions to a committee of seven to report to next year's convention, which will be held in advance of the next session of the Legislature.

Another progressive movement quite freely discussed was the desirability of the representation of California products at distant expositions. It was precipitated by Mr. Naftzger of Los Angeles endorsing Mr. J. A. Filcher of the State Board of Trade for appointment as Superintendent of Horticulture at the coming St. Louis Exposition of 1903. The resolution was a strong endorsement of Mr. Filcher, but it seemed just what the convention desired, for it was warmly cheered on its way to the Committee on Resolutions. Mr. Filcher was called to the platform and gave an impressive account of what has been done and what can be done by proper California exhibits in distant parts. He also gave an interesting account of the recent Pan-American Exposition and the experience of the California exhibit, which was conceded to be a great success in every way.

A striking and very satisfactory feature of this year's convention was "Ladies' Morning"—the morning of Thursday being set aside for the presentation of subjects by the women under the leadership of their president, selected last year, Mrs. Dr. Sherman of Fresno. There were ten numbers on their special programme, and the range of subjects was quite wide, embracing fruit and dairy work from a woman's point of view, with a fair environment of sentiment, floral, domestic and esthetic, not forgetting modern co-operative effort for the advancement of women and home interests. The morning's work was very creditable to all who participated, and was enjoyed by a large assembly. The men showed their respect and interest by attentive listening and by fervent resolutions of thanks and applause at the close. It is likely that this feature of the convention will be perpetuated. Certainly none is of wider interest.

Another notable feature of the convention was the addresses on Thursday afternoon by the presidents of California's two great universities. Probably never before have the presidents of two such institu-



tions appeared side by side upon a horticultural platform, and there are very few States which could furnish the outfit for such an event within its own borders. There has always been the closest association of horticulture and higher education in California; on the one side appreciative interest and enthusiastic support, and on the other eager and sustained effort to minister to the needs of the advancement of fruit industries. President Benjamin Ide Wheeler of the University of California made a stirring address, emphasizing the service of science in the promotion of the industrial success of nations and classes of producers, citing particularly the advancement of Germany through proper appreciation of exact truth as known to experts, as contrasted with the indirect and amateur character which seems largely to characterize English industrial effort. He forcibly presented the spirit of the day as demanding the best service of experts rather than amateurs in all undertakings which are worth making. The service of science in the advancement of the California fruit interests was also shown by many striking instances and the ambition of the State University to serve the people well in the ascertainment and exposition of truth which is of most direct benefit to them. President Wheeler's address was masterly and it was enthusiastically received. Similar greeting was extended to President David Starr Jordan of Stanford University. He began by endorsing the position of President Wheeler as to the service of science in modern industry, illustrating the idea by other pertinent references to current affairs. He then gave a very clear and impressive discussion of the nature of scientific work, illustrating chiefly by the achievements in plant breeding and the possibilities within reach of faithful and acute workers in that line. This line of thought lies very close to the fruit grower's effort and was thoroughly appreciated and enjoyed. Certainly the participation of the university presidents in the work of the convention will be toward the promotion of progressive horticulture in California.

The convention made a heroic effort to throw light upon that vexed problem, the profit and promise in the olive in California. Gen. N. P. Chipman submitted a report, skillfully presenting the data secured by a most thorough investigation into the experience of growers, oil makers and picklers in different parts of the State, and made significant deductions from the data. The report was so voluminous and so rich in important detail that the convention earnestly requested the State Board of Trade to undertake immediate publication of it, which we trust can be done. Gen. Chipman's conclusions were on the whole favorable to the olive in favorable situations and when well treated, and that is an encouraging fact which many will hail with pleasure. Perhaps no conclusion could be more impressive than this: Gen. Chipman has a Picholine olive plantation of his own which he has hesitated several years between uprooting and grafting over. As the result of his investigation he has decided to keep the trees and graft them over—thus showing his faith by his works. We hope to give his reasons in detail in a future issue. In the discussion which followed Gen. Chipman's report, Prof. Hilgard gave an outline of important conclusions just reached by careful experimentation with pickling ripe olives, the full report of which can now be had by application to the agricultural department of the State University at Berkeley. Two ladies, Mrs. McCann of Shasta county and Miss Baldwin of Calaveras county, both described successful practice in the same work by giving close personal attention to the work and proceeding according to the methods approved at the University, which have already been published in full in the PACIFIC RURAL PRESS.

After the convention the Board of Horticulture held a meeting and elected Mr. J. J. Keegan of Sacramento to the secretaryship made vacant by the death of B. M. Lelong. Friends of Mr. Keegan state, according to the Sacramento Bee, that he has had much rural experience, and was one of the earliest students in this State of the problems of exterminating fruit pests. Mr. Keegan has been connected with the State Board of Harbor Commissioners and with the State Printing Office.

QUERIES AND REPLIES.

Winter Growth of Red Clover.

TO THE EDITOR:—Please advise me at your earliest convenience the proper time to sow red clover for a forage plant, and also to enrich the soil. Do you think it will thrive on a rather gravelly soil without irrigation in Santa Clara county?—R. K. PATCHELL, South San Francisco.

Red clover will not make a satisfactory plant for green manuring, because it does not make a good growth at midwinter temperature, but waits for early spring warmth, and when it reaches a good mass it is usually too late to plow under because of loss of moisture from the soil. It will not make a good forage plant in such soil as you describe, because without irrigation it will soon stop growing for lack of moisture and the chances are that it will die out before the end of the first summer. For a winter growing legume you must have something which will stand frost and grow at low temperatures. Burr clover and field peas are the best we have, though some of the vetches are very promising.

Fruit Trees From Cuttings.

TO THE EDITOR:—We are thinking of replanting our pear, peach and prune orchards with cuttings. Can you give us any information on this subject? Has it ever been tried?—S. W. F., Santa Clara.

Pear and prune wood starts fairly well from cuttings if conditions are favorable, but the percentage of failure is so great that we would not for a moment think of starting with cuttings in the orchard. The cuttings should be rooted in nursery if at all. We do not think much of the proposition, not only because of the extremely uneven growth which you will get even on the cuttings which start at all, but because the root system from a cutting is inferior to that of a good seedling. It is apt to be one-sided and flat or shallow instead of penetrating. The growth of fruit trees from cuttings has been fully tried and abandoned in favor of budded or grafted seedling roots. It is a case of the survival of the fittest. From peach cuttings we doubt if you could get anything worth considering.

Learning to Milk.

TO THE EDITOR:—What is the best way to milk a cow—that is, to learn to do it? Should the thumb be doubled within the palm, as the Swiss milker does, or the whole hand used in its natural way?—RANCHER, Edenvale.

The best way to milk is the way which gets all the milk and pleases the cow. Americans are an open-handed people, and it works as well in milking as in statesmanship. The point of milking is to strangle or close the upper part of the teat by closing the thumb and first finger around it. When the milk is thus prevented from pushing back into the udder, pressure is exerted by the other fingers. The Swiss milker closes the base of the teat with his thumb knuckle, and it can be done that way; but the pressure of the open thumb and forefinger as they close together exerts a more even pressure and is better.

Sheep Manure for Orchard and Vineyard.

TO THE EDITOR:—What effect has sheep manure on the soil of the vineyard and orchard? I expect to use it well rotted. Please inform me through your indispensable paper what amount of manure to use per acre is advisable.—R. H. POWERS, Kings River.

Good sheep manure is a strong stimulant to wood growth, and should be used only when needed and in quantities which will force good, but not excessive, growth. What this amount is depends upon the soil and the plant. About four tons to the acre, well distributed and not especially massed about the tree or vine, is an average amount to use. Some soils sometimes need more to carry old bearing trees or vines; some soils do not need any. Experiment with a moderate application and watch for results.

The Crown Borer.

TO THE EDITOR:—Will you kindly inform me through the PACIFIC RURAL PRESS when the ordinary borer that works in the root crown of the prune tree does its work? Has it two seasons? When should it be hunted? When should papers be put on to keep it out and when removed?—RANCHER, Edenvale.

The crown borer has but one brood in the year, but work has to be at different times, according to

the end you have in view. By hunting we suppose you mean cutting the worm out. This has to be done during the fall and early winter, because then the worm is large enough to find easily, and still it has not advanced to the pupa state. The earlier in the fall this can be thoroughly done the less boring injury the grub has a chance to do. Go at this now, if you choose that method. The use of paper is for the purpose of balking the moth when it tries to lay eggs on the bark at the base of the tree. That naturally has to be done in advance of the appearance of the moth, and April is a good time to put the paper in place. There is no particular time to remove the paper, because paper does not serve with this insect as bands do with codlin moth. They catch the mature larvæ, and they must be destroyed before the moth can escape.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending December 9, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Warm weather continued during the first of the week, followed by cooler toward the close, with heavy frosts in some localities. Rain has fallen in all parts of the valley. Farm work progressed slowly, owing to the heavy condition of the soil. Plowing and seeding will be resumed as soon as weather permits. Grain is making splendid growth and prospects are good for large crops. Green feed is good and abundant in all sections. Stocks are in prime condition. There are reports of premature budding of fruit trees in some localities. No damage by frost has been reported. Orange and olive shipments continue.

COAST AND BAY SECTIONS.

The weather has been generally cloudy or foggy most of the week and considerably cooler at the close, with heavy frosts in some sections. The rainfall has been heavy in the central and northern districts, retarding farm work to some extent, and light showers have fallen in the southern counties. Plowing and seeding are progressing wherever possible. Early grain is making rapid growth and green feed is abundant. Stock are in excellent condition. The frosts have caused no damage, except possibly to tender vegetation. Orchards and vineyards are in good condition; tree pruning continues.

SAN JOAQUIN VALLEY.

Cooler weather has prevailed throughout the valley during the week, and heavy frosts occurred in some sections Friday and Saturday nights. Heavy fogs and dews have prevailed in many places and light rain has fallen in nearly all parts of the valley. In some localities the soil is still too dry for plowing, but in others plowing and seeding are progressing satisfactorily. Early grain continues in good condition. Green feed is plentiful and stock are doing well. The frost caused no damage except to garden vegetables. The orange season at Reedley has closed; the yield was fair and quality excellent.

SOUTHERN CALIFORNIA.

The weather has been generally clear and cool, with fogs along the coast. Light sprinkles of rain have fallen in some localities, but they were of very little benefit to farmers. Light frosts have occurred in some sections; no damage has been reported. Plowing and seeding are progressing slowly, and rain is needed to soften the soil before this work can be completed. Early grain is in good condition, but needs rain. Pasturage continues good in most places. Oranges are in excellent condition and will yield a heavy crop in some places. Orange picking is in progress near Anaheim.

EUREKA SUMMARY.—Rain has fallen nearly every day during the past week. The soil is too wet for farm work; the rivers are rising slowly.

LOS ANGELES SUMMARY.—Seeding is being retarded on account of dry weather. Rain is needed for grain and feed. Orchards are being irrigated. Orange shipments are active. Olive harvest is on; a large portion of the crop will be made into oil.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, December 11, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall to Same Date Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week...	Minimum Temperature for the Week...
Eureka.....	3.00	16.01	15.41	12.61	58	36
Red Bluff.....	.59	9.66	6.74	6.94	53	36
Sacramento.....	.08	5.98	6.34	4.95	62	38
San Francisco.....	.29	5.80	5.85	7.13	60	45
Fresno.....	.06	2.17	5.10	5.43	66	38
Independence.....	.00	1.34	2.18	1.51	66	28
San Luis Obispo.....	.12	4.56	9.91	4.25	72	40
Los Angeles.....	.00	2.46	6.79	3.95	74	40
San Diego.....	.01	.76	1.73	1.87	74	46
Yuma.....	.00	.22	.02	1.42	82	38



## HORTICULTURE.

### Notes on Plantations of Caprifig Trees.

By DR. GUSTAV EISEN, at the Fruit Growers' Convention.

It is not necessary to dwell upon the importance of caprifigging the true Smyrna figs. Experiences during the last two years have fully demonstrated the necessity, value and practical feasibility of caprifigging. The nature and culture of caprifig trees is, however, less understood, and remarks upon this topic may be of more general interest. Such horticulturists as are interested in the process of caprifigging can do no better than consult the paper entitled "Smyrna Fig Culture in California," by Dr. L. O. Howard in the yearbook of the United States Department of Agriculture for 1901.

In order to have a sufficient supply of blastophaga wasps for caprifigging, it becomes necessary to cultivate the caprifig trees in which the wasps breed. In the Asiatic—or, rather, Mediterranean—countries the caprifig trees do not necessarily need to be cultivated, as they grow wild almost everywhere, and the figs containing the wasps may be had by simply plucking the wild figs at the proper time. But experience has taught the Mediterranean fig growers that not all caprifig trees are alike, and that it is not always safe to rely upon wild figs producing sufficient crops of the proper quality at the time the figs are required for the caprifigging of the Smyrna figs.

**OFFICE OF THE CAPRIFIG.**—The question now arises as to the qualities most highly prized in a caprifig tree and their practical importance to the horticulturist. It may not be entirely superfluous to point out, first, the practical relationship of the caprifig and the wasps used in the process of caprifigging. When the Smyrna figs have attained a certain size their female flowers become receptive—that is, they require to be pollinated by the pollen from the male flowers, in order that they may set fruit and mature seeds. As the fig is closed, and no pollen can enter through the aid of the wind, as is sometimes the case in other kinds of flowers, it must be brought there by the means of insects. The aid of insects in bringing pollen from one flower to another is a most common thing in nature, and it is safe to say that the majority of flowers are pollinated that way. It will thus be seen that in order to caprifigate the Smyrna fig we require not only caprifig trees and wasps, but it is also necessary that the wasps should be covered with the fig pollen when they emerge from one fig in order to enter another. This makes the question more complicated yet, and it is this question which distinguishes the caprifigging of the Smyrna figs from the caprifigging of the wild or caprifigs. The wild figs or caprifigs can be caprifigged and set fruit without any pollen being present, but the Smyrna figs would all fall off, and dry without maturing, if pollen was not present in sufficient quantity to pollinate a large number of fig flowers.

**WHY DIFFERENT CAPRIFIGS ARE NECESSARY.**—The successful cultivator must carefully consider the qualities of his caprifigs, as upon their nature and characteristics depends the profit of years of labor, just as much as upon the quality of the Smyrna figs intended for fruit. The main point that is to be considered is the necessity to procure an abundant supply of blastophaga wasps covered with pollen at the time required. If either the pollen fails or the wasps appear too late, or too early, a failure will be the result. To avoid these the cultivator must prepare a plantation of the proper kinds of caprifig trees. The first caprifig tree which we know of with certainty in this State was imported to California by the Bulletin Co. of San Francisco. This tree was planted at Niles, on the Shinn place, and it is safe to say that many trees resulting from cuttings of this tree have been scattered over this State and are now growing in full vigor, without having attracted any special attention. Unfortunately, this caprifig tree was not of a variety which could harbor the fig wasps during any longer period than a few months. It possesses only one crop of figs a year, the crop known as the profichi or spring crop. The other two crops are missing. This profichi crop sets late in the fall of the year, and becomes receptive to the wasps next spring—some time in March or April—and matures during June or July. Now, it is known that the blastophaga wasps require young caprifigs as soon as they hatch out, in order to have a place where to lay their eggs. If, as in the caprifig just referred to, there are no such young figs present, it is evident that the wasps must soon perish before they find any flowers suitable for their eggs. It will thus be seen that there must be different kinds of caprifigs and that some figs are more suitable for harboring the wasps than others. As a general rule, it may be said that the caprifig tree possesses three more or less distinct crops a year, and that each crop overlaps the other, either on the same tree or on different trees. In each crop of caprifigs hatches a distinct crop of fig wasps, and there is thus a constant succession of figs and wasps, either on the same tree or on different trees.

**THE DIFFERENT CROPS OF CAPRIFIGS.**—The figs which are used for the caprifigging is, as every one

knows, the profichi crop. It will be seen that the crops of the caprifig are not all of the same importance to the grower. Of the profichi figs we require many thousands, or many hundreds of thousands, as the case may be, while of the other crops we have need of only a few figs. The different uses to which the different crops of the caprifig tree are put may be stated in a few words. All the three crops of the caprifig are used for caprifigging the caprifig itself, while only the profichi are used in caprifigging the Smyrna figs. As long as we possess a caprifig tree which bears three distinct crops each year without fail, we need have no anxiety about caprifigging the caprifig tree itself. But if our caprifig tree is such that it bears only one or two of the necessary three crops, then it becomes necessary to interfere and procure the missing caprifig crop from some other place. The three crops of the caprifig tree are designated by different names. The fig crop which appears as small buttons in the summer and attains its full size during the winter is known as the mamme fig. These figs harbor the wasps during the winter; in other words, the wasps hibernate in the mamme. The figs which set in the fall as small buttons, and which mature in the spring, are known as the profichi figs. The figs which set in the spring, and which mature during the same summer, are known as the mammoni figs. All the Italian investigators have mentioned that there are three distinct kinds of caprifig trees. Some bear only one crop of figs a year. Those are called by them "uniferi." Others bear two crops a year and are called "biferi," while those which bear all three crops are known as "triferi." Now, we know that the Bulletin fig mentioned above bears only one crop, and thus belongs to the type known as uniferi.

The question arises, why should we not discard all varieties which bear only one crop and plant only those which bear the regular three crops? To answer this question is not as easy as it may appear. It will suffice to state here that experiences have shown that it is desirable to have caprifigs of the three kinds. Figs which bear only one crop a year are, as a rule, much stronger and bear their special crop with more vigor and abundance than such trees as divide their vigor and fertility between the three crops. As we require a large number of profichi figs, it seems but natural that we should preferably plant caprifig trees which bear this crop in abundance. If such is our choice, then we may have to look to other trees for mamme and mammoni figs. This is exactly what is done in Smyrna. There the fig growers plant principally caprifigs which bear a large profichi crop and depend upon their wild fig trees to furnish mamme and mammoni figs.

**LOCAL ADAPTATIONS.**—Another point to consider in the choice of caprifigs is that these fig trees are especially adapted to certain localities, in which they thrive, while in others they prove a failure. In California caprifigs have not yet been tried enough to know which varieties are suited to any certain locality, and which are not suited to that same locality. Because a certain caprifig does well, we will say, in Sacramento, it is not by any means certain that it will do well in San Jose. The planter who starts his caprifig orchard with the expectations that he requires only a single caprifig variety may be much disappointed when the time comes for caprifigging his trees. He may find that the variety he has planted possesses too few profichi, though he knew that this same variety possessed the most desirable quality in some other place. The grower who intends to plant Smyrna figs would, therefore, do well in supplying himself with a variety of caprifig trees of as distinct kinds as he can find.

It must also be remembered that some caprifig kinds are more susceptible to frost than other kinds. Heavy frosts will kill the winter mamme figs and destroy the wasps. In order to replenish the young profichi figs with wasps it will then be necessary to import new mamme figs from some frost-free place and caprifigate the profichi figs anew. This leads to the desirability to have caprifigs planted in various places, both in the foothills and on the plains. Places especially suited to caprifigs are those which are sheltered. Mr. A. E. Schwarz was the first one to demonstrate that the caprifig requires a sheltered position in order to properly shelter its wasps. In exposed localities the wasps are apt to be blown away before they have a chance to enter any of the young figs. Accordingly, the best places for caprifig trees are sheltered nooks, among hills or in otherwise protected places. Or, if such places are not to be had, then it is best to plant the caprifigs close together and shelter them from the prevailing winds by windbreaks of evergreen trees. The caprifig trees should be planted in hedge rows, say 15 feet to 20 feet apart between the rows, while in the rows they should stand much closer. After the trees are once planted they should never be pruned, as this would let in sun and air. The wasp requires shelter in order to thrive. If this is furnished, then it is safe to say that the little insect will take care of itself.

**A COLLECTION OF CAPRIFIGS.**—In California we have now growing not less than eighteen different varieties of caprifigs, all of which have been gathered together in one collection on the place of Mr. John Rock at Niles. This collection includes all the figs imported by different persons from abroad, as well

as some varieties originated in California. These varieties have been carefully described in a paper which is now being printed by the United States Department of Agriculture. Many of these varieties are of exceptional promise and will no doubt be widely distributed.

**SUMMARY.**—It may facilitate the understanding of the culture of the caprifigs if we here recapitulate the main points which I have endeavored to bring out in the foregoing:

1. It is highly desirable, and in many cases necessary, to plant several varieties of caprifigs.
2. It is to advantage to have caprifig plantations in at least two different places, in order to insure as much as possible against frost, and for the purpose of having ripe caprifigs when they are wanted. With an assortment of caprifigs, and with several plantations, one of which should be in a locality sheltered from severe frosts, we need have no fear of the dying out of the wasps.
3. The caprifigs should be planted close together in odd nooks and corners near, or in, the orchard; or, if no suitable locality is found there, as near the fig orchard as possible.
4. Caprifigs require no pruning. They should be headed low, or allowed to divide from the very ground, and suckers should be encouraged, in order that there may be plenty of shade for the wasps.
5. The practice of grafting the caprifig onto the limbs of the Smyrna figs is entirely unsuitable, as it is doubtful if the wasps would live in a few exposed branches. It is also doubtful if the profichi from the caprifigs would ripen at the proper time and in sufficient number to insure caprifigging of all the Smyrna figs which we wish to have caprifigged.
6. Caprifigs should preferably be on their own roots and not grafted as standards on other fig stock.

## ENTOMOLOGICAL.

### County Horticultural Boards and What They Have Accomplished.

By H. P. STABLER of Yuba City, Secretary of the Association of Horticultural Commissioners.

The statement has been made that California was the first State to invoke the aid of legal means in waging warfare against insect pests. Whether first or not in this work, California has the reputation of having accomplished better results in the effort to exterminate fruit pests and diseases than any other part of the world. Our methods, and the successful remedies in use, are copied and applied in every quarter of the earth where horticulture is established.

**THE CALIFORNIA PLAN.**—Our plan is in advance of the methods in practice elsewhere and consists of a State Board of Horticulture of nine members, with County Boards of Horticulture in twenty-nine of the fruit-growing counties of the State. The Legislature has wisely granted great power to the State Board, and, by appointment as quarantine guardians, this authority is in turn vested in the members of the county horticultural boards. Thus the county commissioners become the agents or deputies of the State Board of Horticulture and are charged with enforcing the State law and the quarantine regulations of the State Board.

**WORK OF THE COUNTY BOARDS.**—The county boards, with their deputies, known as local inspectors, constitute an energetic, earnest body of men, who are constantly working for the suppression of pests and diseases. The work of these officers is characterized by its thoroughness, and fruit growers of California have come to look upon the county commissioners as valuable assistants in our industry. It is not many years since some nurserymen considered an inspection of their stock an intrusion on the part of the county commissioners, and occasionally resorted to unfair methods in avoiding inspection; but to-day the nurseryman realizes more than ever the advantages of being able to offer clean stock for sale, and invites the closest examination of his trees before placing them on the market.

The shipper and dealer formerly paid little or no attention to the pests infesting fruits; but when the quarantine officers at the point of destination of the shipment began to dump boxes of his goods, he realized that clean fruit had an increased value over the other kind. Unquestionably, every one in the fruit business is alive to the necessity of thorough disinfection of infested and infected places, and great strides have been made in the past decade in arousing this sentiment in California.

**WHAT HAS BEEN DONE.**—Washes have been thoroughly studied, their manufacture simplified and their application intelligently accomplished. Parasites have been distributed, propagated and studied, while fumigation has received careful attention by the fruit growers of California. In all this work the county horticultural boards have been foremost in carrying out the instructions of the State Board and assisting in experiments the county boards have always been active. The work of the Agricultural Department of the State University has been beneficial to horticultural



ture by co-operation of the county boards, by constant communication with the professors of the college. Even the important investigations of the Agricultural Department at Washington and the work of the agent of the department on this coast, Prof. Pierce of Santa Ana, have been eagerly received and communicated by the county horticultural boards. In short, the advanced position of California horticulture to-day, while it is due, of course, to very many causes, is largely the result of the untiring work of these officers in the fruit districts.

**ANNUAL MEETINGS.**—For eleven years the members of the county boards have been meeting in annual session at the same time and place as the Fruit Growers' Convention. At these meetings the officers of the State Board, University professors, fruit growers, nurserymen and others interested have gathered for conference and instruction, a better understanding of our quarantine laws, and the nature and method of extermination of pests has resulted. In fact, much of the success of the quarantine officers has resulted from the uniform work carried on in the counties, and resulting from a discussion of methods in these annual gatherings. Proposed legislation, both State and national, is taken up and discussed at our meetings, and ordinances in effect in various counties are compared, with a view of reconciling differences and securing uniformity. A uniform certificate of inspection has been adopted and is generally used, new remedies and improved methods of application are exploited.

Many of the county horticultural commissioners are making entomologists of themselves, and the work of several of them has been recognized by the national Government. The constant and thorough investigations by this body of intelligent workers in our fruit districts has been of greater value to horticulture in our State than any other feature of our industry. The work is carried on quietly, without display, and, while it has seldom received public recognition outside of the reports of the State Board, it has accomplished great results and is destined to achieve more in the future.

## THE VINEYARD.

### The California Wine Industry.

By W. J. HOTCHKISS at the State Fruit Growers' Convention.

It is not my purpose in this article upon the future of the wine industry of the State to go back and give a history of the rise of the viticultural industry. What I desire to draw attention to is the line along which I believe the cultivation of the vine and the production of wine can be carried out for the best interests of the State.

An industry is of profit to the State to the extent to which it gives remunerative employment to the people and profitable returns for the capital invested. I believe that the wine industry of California should be directed to the extent of large productions and larger distribution rather than to the production of small gallonage of fine wines at prices which would forbid their use excepting among people of independent means.

As fine and as good wines can be and are produced in California as anywhere in the world, whenever we take the time and expense to do it, and it is as well that a certain number, or a small percentage of the wine makers, forward their efforts in this direction. But these fine and high priced wines only represent a small percentage of consumption—we would say in a rough way 5% to 10%—therefore the efforts in the production of wine should be directed along the line of the production of the 90% to 95% which goes to make up the bulk of the wine produced.

It would seem a pity to divest the wine and the vine of the romantic and poetic ideas which have from time immemorial been associated with the production and cultivation of vineyards and wine, but the lines along which I think the production of wine should be followed in California should be entirely free and devoid of sentiment and the policy be dictated entirely by the grosser purposes of commercialism.

California, in my opinion, produces already the best wine in the world. As a people we have not that patience which would induce us to build expensive cellars and to there store and age the wines for a long period of years to be afterwards brought out and sold by our children, or perhaps our grandchildren, for their profit. What we want to produce is a wine that is cheap enough and good enough so that the humblest laborer can have it on his table in competition with beer, coffee and milk.

**WINE MAKING.**—The wine of California is the best ordinary wine in the world for the same reason that we produce better results in all other lines of manufacture. We have a climate and soil equal to any for the production of good grapes. The manufacture of wine is a question of intelligence and mechanical handling. The old idea that around the making of wine there was some mysterious juggling not to be understood excepting through ages of hereditary knowledge is false. Fermentation is a matter of

chemical study. The care and preservation of wines are also matters of intelligent understanding and germ annihilation.

Our wine is as far superior to the wine made by the old and antiquated methods of foreign countries as our other products are superior, on account of the better machinery and facilities which we have. It is only necessary for an observer to go into one of the well ordered wineries of California with its modern machinery, where nothing scarcely is seen of the grape from the time it enters the crusher until the pomace is carted away, and then to have him go into some winery of Europe where wine is yet being tramped by the feet from the grapes, where the pomace is being handled in tubs, and where the general smell of acetic acid and decaying grape stems permeate the whole place, to understand why this is so.

**RESISTANT VINES.**—The wine makers of the State, in order to keep up their production, are now planting resistant vines in large acreages. The three principal places where wine has been produced in California are Sonoma, Napa and Santa Clara counties. In each of these three counties the phylloxera has made such inroads that it has in many instances destroyed the principal vineyards, and it is only a question of time, and a short time, when the present vineyards will all have been a thing of the past. In Napa county, where the phylloxera first appeared a number of years ago, the planting of resistant stock has been going on for a number of years, but not attendant with very satisfactory results. In many cases, where the right kind of resistant stock was procured, it was not planted upon a soil adapted to that stock or the right scion was not grafted upon the resistant stock. The adaptability of stock to soils and scions to stocks had heretofore been something the vineyardists had known little about. In the last few years, profiting by the experience of the older sections where the phylloxera first appeared, a careful study has been made of the resistant stocks with the result that now an intelligent knowledge has been obtained by the vineyardists in the different sections, of the resistant stocks best adapted to the locality, and with this knowledge in hand, it is reasonable to suppose that in a few years, even in the phylloxera devastated districts, the planting of vineyards on resistant stock will have brought the acreage back to that of former years. Added to this are the large plantings in the interior country, principally in the San Joaquin valley, where the phylloxera has not made its appearance to any considerable extent. The area of this San Joaquin valley is so great that vineyards can be planted at distances so extreme from each other that it would be a good many years before the phylloxera will communicate from one to another, and it is to this section that we now look in the next few years as the source from which the quantities of wine necessary to supply consumption is to be obtained.

The climatic conditions of the interior valleys are such that the very highest grade of dry wines cannot be produced, but with modern systems of refrigeration and properly conducted buildings, wine which will be good enough to commend itself to the body of people as a substitute for beer can be produced at a much less cost than in any other section of the State.

It is the opinion of the writer that the production both of dry and sweet wine in the San Joaquin valley in the next five years will be such in quantity as to astonish those who have not made a study of the conditions there and who have supposed that the phylloxera was on the point of destroying the wine industry of California, and raising the price of wine to such a prohibitive figure that the masses could not drink it.

**THE OUTLOOK.**—To those who at this time plant vineyards, whether upon resistant or common vinifera stock, there is a promise of very large returns of profit, and it is reasonable to suppose that it will take at least five years to reinstate the vineyards to their former productive power, during which period the prices of grapes and wine are likely to remain, if not at their present very high value, at a good figure.

The discussion on the future of the wine industry introduced by Mr. Hotchkiss was continued by Professors Hilgard and Husmann on the basis of recent progress with resistant stocks. Mr. Hotchkiss favored rather the planting of non-resistant stocks, or rather direct planting of cuttings of the varieties desired, on especially rich lands irrespective of phylloxera in the vicinity, hoping on such strong lands to secure good growth of vines and profitable production for a satisfactory length of time before the insect asserts itself. This view seems to have quite a wide support and certainly is a prevailing policy. It can, of course, only be advocated as a means of cheaply proceeding to quick returns and not as a basis for the establishment of permanent vineyards. Mr. Hotchkiss also believes in large production of average quality wine grapes, while some others wished to work for specially fine qualities. The discussion was not long, but quite interesting.

## AGRICULTURAL ENGINEER.

### Mountain Roads.

#### NUMBER II.

JAMES W. ABBOTT in Year Book U. S. Dept. of Agriculture for 1901.

Experience in heavy freighting has shown that wagons can be actually and satisfactorily controlled in all weathers on 12% grades, but that they can not be thus controlled on steeper grades, and that where heavy freighting has been attempted on steeper grades it has almost invariably been attended with terrible accidents. In freighting on any grade the weight and number of wagons will depend upon the proportion between material to be hauled up and freight back. On a properly constructed dry road four animals, averaging 1300 pounds each in weight, will haul 6500 pounds, total weight, distributed between wagons and contents, up a 12% grade at the rate of about 1½ miles per hour. Descending, the four animals will haul all that a wagon can hold up, but in practice this amount rarely exceeds 16,000 pounds on a single wagon, or 20,000 pounds on a lead and trail, and the average is probably not much in excess of 10,000 pounds on one wagon, or 14,000 pounds on lead and trail. When roads are icy heavy wagons tear up a roadbed badly.

But while 12% grade is admissible as a maximum, roads of lighter grade are so much more efficient and satisfactory in every way that only the gravest necessity should ever determine the maximum at 12%.

Mountain roads are routes of travel between points of different altitudes. The most common, as well as the most serious, mistake made in their location is the attempt to cover this distance by too short a line. On a 12% grade every pound of freight going up is elevated 12 feet for each 100 feet of horizontal distance traveled. On an 8% grade it is elevated 12 feet in 150 feet of horizontal distance traveled, while on a 6% grade it is elevated the same amount in 200 feet of horizontal distance. Or, in other words, the distance required to get a 12% grade must be increased one-half for an 8% grade and doubled for a 6% grade. Tables have been published giving the comparative weights which a horse can pull on different gradients; but, so far as the writer knows, no actual statistics have ever been compiled which show what would be the difference in performance in actual freighting between good roads of different gradients. The limit of load which a team can pull on any road is determined by the steepest place in that road. It is rare that a mountain road is built on which the maximum gradient is less than 12%. It is also true that there are very few places where mountain roads have been constructed that it was not feasible to secure a maximum under 12%. The extra length that would be required is generally much less than one would at first suppose. Roads built on a continuous uniform grade are very rare. Many seem to go up steep places just for the sake of going down again, thus giving a grade adverse to the heaviest traffic, which ought never to be compelled to climb a foot in descending a mountain. So far as the writer's study and observation have extended, 99% of all the roads built for heavy mountain traffic might have had a maximum under 12%. It is putting it very moderately to say that a team will haul up 50% more load in the same time between two given points on a road with an 8% maximum than it could haul on one of similar surface with a 12% maximum.

Besides the advantage in upfreighting, the 8% road possesses many favorable points which are liable to be lost sight of. It is vastly safer for both light driving and freighting; on passenger vehicles brakes, while desirable, are not essential to safety; with heavy loads, if the brake fails there is a fair chance of escape for driver, team and wagon. Such a road is not seriously damaged by rain and melting snows, which work such injury on steeper grades; damage from rough locking is enormously reduced, and as such practice can be to a great extent avoided the time thus consumed is saved. Repair bills on wagons and harness are lessened, and the life of wagons is greatly prolonged. It is a pleasure to drive down an 8% grade, as it produces a sense of exhilaration which most people find agreeable. As gradients become steeper the sense of danger grows more and more keen. The writer believes that 8% is the gradient to be aimed at where important differences in elevation are to be overcome, and that such gradient can generally be secured. As a rule, in such cases a lower gradient means too long a route without commensurate advantage, while a higher means an unnecessary loss in the very purpose for which the road is required. The maximum adopted in the old Government pike crossing the Alleghenies was 7%.

**IMPORTANCE OF LOCATION.**—Next in importance to grade is location. The worst obstacle encountered on mountain roads is snow. The snowslide, or avalanche, comes sweeping down the mountain side, carrying along everything it meets and depositing its accumulations when the momentum is exhausted. The customary routes of these slides are generally quite apparent to the practiced eye of the mountaineer.

(TO BE CONTINUED.)



## Agricultural Review.

### ALAMEDA.

**EGYPTIAN CORN FOR DAIRY COWS.**—Oakland Enquirer: T. D. Carneal, manager of the Martin ranch, near Livermore, gets the same amount of butter from a given number of cows in the fall that he does in the spring, and at but little greater labor and expense. He does it by feeding Egyptian corn, which is planted in the spring and remains green throughout the summer and autumn months. A small patch will feed a large number of cows. Mr. Carneal says that corn alone will not keep the cows in good condition, and advises the addition of chopped feed. Hay and wheat give the best results, but hay alone will do the work. It would not pay to haul and stack hay for this purpose, but he cuts it and rakes it into windrows, from which the cows feed.

### BUTTE.

**LARGE NAVELS.**—Honor Times: R. H. Lee exhibited four oranges at rival anything we ever saw in oranges. The largest measured 16½ inches in circumference and the smallest 15 inches. The four together weighed six and one-half pounds. The largest one weighed a shade under one and two-third pounds. The tree from which they were picked is five years old and had 124 oranges on it, all of them extremely large.

**LATE FRUIT.**—Oroville Register: Wm. Mullen brought to town Thursday strawberries in bloom, half ripe and ripe, also blackberries green and ripe. The latter were the Texas Early, or Crandall's Ever Bearing. Besides these fruits he had green figs just plucked from the tree, but full grown. His home is at an altitude of almost 2000 feet, which makes the fruit all the more remarkable for so late in the year.

### COLUSA.

**GREEN CORN IN DECEMBER.**—Colusa Sun: We had green corn on our table December 4, grown by Mrs. Fannie Wright in Colusa, and it was as good as any gathered in the summer.

### CONTRA COSTA.

**JORDAN ALMONDS.**—Antioch Ledger: Some months ago it was announced by the leading papers of the State that the Government had secured the Jordan almond, but they did not mention the fact that David G. Fairchild, Agricultural Explorer, Department of Agriculture, U. S. A., is the man to whom California is indebted for the coveted prize. Mr. Fairchild, on his way from Washington to Japan, called on James O'Hara, father of the almond industry in eastern Contra Costa, and after a day's drive through the orchards became much interested in the peculiar soil, climate and products of the locality, and arranged with Mr. O'Hara to plant and experiment with the Jordan almond and other semi-tropical plants which he agreed to send him.

### HUMBOLDT.

**TANBARK EXTRACTOR.**—Eureka Standard: Benjamin Harris of Briceland reports that the work of clearing the land for the tanbark extracting plant has been begun and the contract has been let for the cutting of the necessary lumber for the buildings. The erection of the plant will begin in a short time. Mr. Wagner, the leading member of the firm, will be in the county next month and will then set the price that is to be paid for the tanbark. The owners of the land containing tanbark in that section are more than pleased with the outlook and feel that they have a good market opened for their product.

### LAKE.

**PRIZE PIGS.**—J. J. Bruton claims the distinction of raising the prize pigs of the season. He killed two eight-months-old pigs this week that yielded 105 pounds of lard and forty-five pounds of sausage, in addition to hams, shoulders and sides.

### LOS ANGELES.

**CITRUS FRUIT SHIPMENTS.**—Los Angeles Times: The total shipments of citrus fruits from southern California for the season—November 1, 1901, to date—are 667 carloads, of which 125 are lemons and 542 oranges. These represent the total movement for November, the first month in the new season, with Sunday, December 1, added. For November, 1900, the shipments were 473 carloads, of which 140 were lemons and 333 oranges. Thus this year is ahead by 209 carloads of oranges and 15 carloads behind in lemons. In the aggregate this year is 195 carloads ahead. The shipments in 1896 were less than 250 cars, all told.

### MERCED.

**PROFITS OF DAIRYING.**—Los Banos Enterprise: W. J. Jameson milks fifty-seven cows. It takes two men to look after them, to do the milking, take the

milk to the creamery, etc. This month his creamery receipts amounted to \$318.98, or over \$5.50 for each cow. Several of the cows are young, and some of them are not very good, so he thinks he will be able to do better after he culls out the poorer ones. Besides the creamery check, he has made money in raising young stock. He sold \$200 worth of hogs recently and has more left than he sold. These hogs were raised in pens and lived exclusively on skimmed milk.

### MONTEREY.

**A PROFITABLE CROP.**—Salinas Index: Joseph Phillips at Spence Switch, near Salinas, this year had twenty-two acres planted to sugar beets, which averaged twenty-four tons to the acre, or a total of 528 tons. He received \$4.50 a ton for his beets at the Spreckels factory, or \$2376 for his crop. Mr. Phillips figures the expenses of planting, cultivating, digging and delivering his beets to the factory at \$1.25 per ton, or \$660 for his crop. This gives him a net profit of \$1716 on his twenty-two acres of beets. [Mr. Phillips' estimate of the cost of the beets is below ordinary experience in that line.—ED.]

### NAPA.

**GROWING TOMATOES ON A LARGE SCALE.**—Napa Journal: Max Thelig, superintendent of the Cutting Packing Co.'s ranch in Carneros district, raised 300 tons of tomatoes on forty acres this year, and calls it a light crop. He says he should have got about 400 tons. The tomatoes were valued at about \$7.50 a ton.

### RIVERSIDE.

**ANOTHER NEW NAVEL.**—Riverside Press and Horticulturist: J. E. Cutter exhibited to the directors of the Fruit Exchange a new variety of Navel that promises to be valuable soon. The tree from which it was taken was planted in 1893, and in 1895 Mr. Cutter set buds from a nursery tree in the larger tree, which bore fruit—its first in 1899—and has borne more or less every year since. The new Navel is considerably larger than the other Navels on the tree, is very well colored and of good flavor. Mr. Cutter believes that it is a cross between the Navel and the Parson Brown, one of the best Florida varieties. Several embryo seeds, scarcely larger than pinheads, were found in the orange. Mr. Cutter thinks that this orange might be valuable for early districts and for holiday shipments. He has no buds for sale and will not have for several years.

**HEMET OLIVE CROP.**—Hemet News: Shipments of olives to Los Angeles continue to be made every day. Tuesday of this week the morning train was delayed nearly forty minutes, owing to so many olives being forwarded. The crop will exceed 100 tons for the Hemet tract. The picking alone, even at 1¢ a pound, will cost \$1500 or more.

### SAN JOAQUIN.

**A GREAT BEAN FIELD.**—Stockton Mail: During the present season the San Joaquin and Sacramento river districts produced 24,720 acres of beans. In 1899 the total area was 13,000 acres, with an average yield of twenty-eight sacks per acre, amounting to 264,000 sacks, or 11,500 tons, of which nearly one-third was ruined by the early rains. In 1900 the total number of acres was 18,375, with an average yield of twenty sacks per acre, amounting to 367,000 sacks, or about 16,000 tons. The crop suffered in the different localities from drought. The amount of this year's crop is not definitely known as yet. The acreage in potatoes is estimated to be about 18,000 and the yield 1,800,100 sacks. The acreage of yellow and silver skin onions is large in comparison with last year, being over 2000 acres, with an average yield of about 100 sacks per acre. Most of them have already been shipped East. There are about 500 acres of broomcorn.

### SANTA BARBARA.

**HEAVY CROP OF LIMA AND OTHER BEANS.**—The threshing of the bean crop at Carpinteria has been completed. The crop was unusually heavy, in some fields the production being a ton to the acre. There were some special contract beans which were sold at 5¢ per pound. The Ballards raised 280 tons of beans. Other ranches produced from 20 to 140 tons each. The general price for the Lima bean this year is 4½¢ a pound. A very successful bean season is reported from the Santa Maria valley. The total amount of the harvest was 200,000 sacks. Its estimated value is \$600,000. About 175,000 sacks are Small White and the remainder are Pink beans. Only about 30,000 sacks have been sent out of the valley so far. Most of these went to Boston and New York. It is expected that a large amount of the crop will be sold to the Government. The price at present is \$3.25 for choice Small Whites which had not been exposed to recent rains. The

cheapest are now \$2.90, but most farmers are holding back for a rise. A number are bound by stipulation to sell Small Whites at \$2.50 on contracts entered into last spring. About 60,000 sacks of beans are stored in the Pacific Coast warehouse and 90,000 in the Southern Pacific warehouse at Guadalupe, the remainder being in private warehouses.

### SANTA CRUZ.

**APPLE SHIPMENTS.**—Watsonville Pajaronian: Eastern apple shipments for the past week amounted to sixty carloads, making a total of 876 carloads for the season. Same week last year twenty carloads were shipped from Watsonville. Though several of the smaller packing firms have finished their season's work there are yet quite a lot of apples in this city which have not yet been sold. From interviews with packers and handlers we place the amount of four and five-tier stock in packing houses and sheds in Pajaro valley at 250 carloads.

### SOLANO.

**IMPORTING COLORADO CATTLE.**—Suisun Republican: Lewis Pierce, Loran Barbour and Frank Gurlette have returned from La Junta, Colo., where they went to get the cattle purchased by Mr. Pierce some time ago. There were eighteen carloads of two-year-old Herefords in the bunch, and they are a fine lot. There are over 900 head altogether. The cattle have been taken to Mr. Pierce's stock farm.

### SONOMA.

**TO FURTHER THE JERSEY BREED.**—Petaluma Argus: The Northern California Jersey Association was organized in Two Rock valley recently to further the Jersey breed. Rollin Andrews of Two Rock was elected president, J. McClish of Healdsburg vice-president and B. B. Hinshaw secretary. These, with Mrs. J. McFarland of Napa, Joseph Millard of San Anselmo and George T. Trowbridge of Windsor, will constitute the board of directors. The next meeting of the Association will be held the last Friday in December.

### OREGON.

**USING WASTE PRUNES.**—Corvallis Gazette: Professor Pernot has tried the matter of saving refuse prunes at the Experiment Station this season with considerable success. He has converted them into

vinegar. He constructed a vat of lumber and had all the small prunes that were worthless to dry dumped into it after being hacked so the juice would run out. He caught from this vat about 600 gallons of prune juice, which was put into barrels and is now partially vinegar. This is a most practical move, for the farmer is taught that he may with the expenditure of a few dollars get lumber and construct a vat 3 or 4 feet high, by 10 feet long and 4 feet wide, with sufficient capacity to save all the prunes he can raise, to say nothing of just those that are small and worthless. Some of the juice was tested at various stages of acidity and proved to be quite palatable.

### Blacklegine Outfit.

The new Blacklegine outfit, furnished with the Pasteur Blackleg vaccine in the cord form, or "Blacklegine," as it is called, has met with great success. This new outfit only costs 50 cents, and renders vaccination cheaper, simpler and more effective than ever. "Blacklegine" is the vaccine in the form of a cord which is saturated with the vaccine. Each dose is separate, which is a great convenience. The outfit consists of a needle furnished with a detachable handle, and there is an extra needle in case of breakage. The dose of "Blacklegine" is inserted in a notch in the needle, and the operation of vaccinating is now as simple as taking a stitch. An illustration of the outfit will be found in our advertising columns.

## Horse Owners! Use

GOMBAULT'S



## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

## SEPARATOR AWARDS AT BUFFALO EXPOSITION AND OTHER INTERNATIONAL EXPOSITIONS

The United States Separator awarded Gold Medal at Buffalo and excelled all others in separating the cream from the milk of the ten dairy herds in the Model Dairy at the Pan-American Exposition. The DeLaval Separator left 25 per cent. more fat in the skim milk than the United States.

The United States Separator received medal and highest prize at the World's Fair, Chicago, 1893.

At the Paris Exposition the United States Separator received a Gold Medal.

The DeLaval Co. received no prize there. In their attempt to get around this, they advertise that the award they claim was the award given to the "Société Anonyme Separator," which they claim

"is the French translation of 'Separator Corporate Company,' the name of their European organization."

The "Société Anonyme Separator" exhibited a Butter Radiator. Their circulars read as follows:

"Le Radiateur produit directement du beurre pasteurisé." The English translation is "The Radiator produces pasteurized butter direct from the milk." In this country this machine is called a "Butter Accumulator" or a "Butter Extractor."

The DeLaval Separators, like those sold by the DeLaval Company in this country, were exhibited at Paris in the name of the Aktiebolaget Separator. They had a very large exhibit, over 100 machines in two places. But regardless of these large exhibits the official list of awards distributed at Paris contained no award whatever to the DeLaval Co. or their European Co., the Aktiebolaget Separator. The name of the separator on the circulars they distributed at Paris is the Alfa-Laval.

The claim of the DeLaval Company that the award given to the "Société Anonyme Separator" was an award to them is an admission that none was given in their name or their European Company, the Aktiebolaget Separator. The award which they now claim was on a machine making pasteurized butter direct from the milk and not a cream separator.

We ask all readers who, in their opinion, is the guilty party making "All sorts of lying and unscrupulous misrepresentations."

For further information about separator awards, we refer to the official published lists.

THE UNITED STATES SEPARATOR EXCELS ALL OTHERS  
IN THOROUGHNESS OF SEPARATION AND  
STANDS WITHOUT A PEER.  
THE BEST SEPARATOR IN THE WORLD

The U. S. does not find it necessary to make false claims in order to get a record.

Vermont Farm Machine Co., Bellows Falls, Vt.



## MORE LYING AS TO PARIS SEPARATOR AWARDS.

Cornered and beaten in its misrepresentation as to the Buffalo separator awards, one of our desperate would-be competitors now reverts to its lying misrepresentation as to the Paris Exposition awards in 1900.

The following official statements speak for themselves:

STOCKHOLM, December 5, 1900.

By request the undersigned hereby testifies that Aktiebolaget Separator [the European De Laval organization] was awarded the GRAND PRIX on its exhibition of cream separators by the International Jury.

(Signed) HENNING ELMQUIST,  
Secretary Royal Paris Committee.

(Cablegram)

STOCKHOLM, April 2, 1901.

We hereby positively certify that Aktiebolaget Separator of Stockholm [the De Laval European organization] were awarded the GRAND PRIX for their Alpha-De Laval separators at last year's Paris Exposition.

(Signed) THE SWEDISH PARIS COMMITTEE.

(Signature legalized through the Anglo-American Telegraph Co)

U. S. CONSULATE GENERAL,  
Stockholm, Sweden.

From evidence this day furnished me I am able to certify that the Separator Company, Ltd. [Aktiebolaget Separator] of this city did receive the "GRAND PRIX" for their Alpha-De Laval separators at the Paris Exposition, in the year 1900, as per announcement in the "Journal Officiel," Paris, of Aug. 18th, 1900, this day presented at this office.

In witness whereof I have hereunder set my hand and affixed my seal of office on this 17th day of April, 1901.

(Signed) CARL P. GERELL,  
U. S. Consul General.

[OFFICIAL SEAL]

Any assertion by anyone and however made that the De Laval separators did not receive the Grand Prize at Paris is simply and wholly a vicious lie, and is particularly aggravating in the case of the concern now insinuating such a thing because its manager was in Paris at the time the separator awards were originally announced and begged and pleaded through the American Government representatives that its own third grade award (on "U. S." cream separators) be changed to a second grade one, which out of special courtesy the French authorities finally conceded.

## THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS.,  
CHICAGO.

1102 ARCH STREET,  
PHILADELPHIA.

103 & 105 MISSION ST.,  
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Where, with Enlarged and Increased Facilities,  
they are better than ever prepared to do

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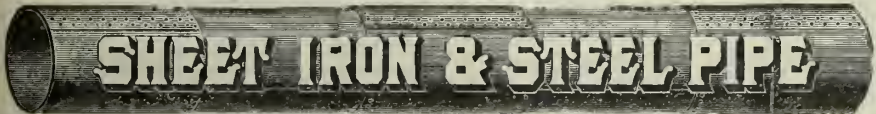
Promptly, and at Reasonable Prices, and will  
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Thomson & Evans Steam Pumps,

Deep Well Pumps, Power Pumps, Etc.,  
Also Marine Engines, Ship and Steamboat Work,  
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MANUFACTURERS OF



FOR TOWN WATER WORKS.

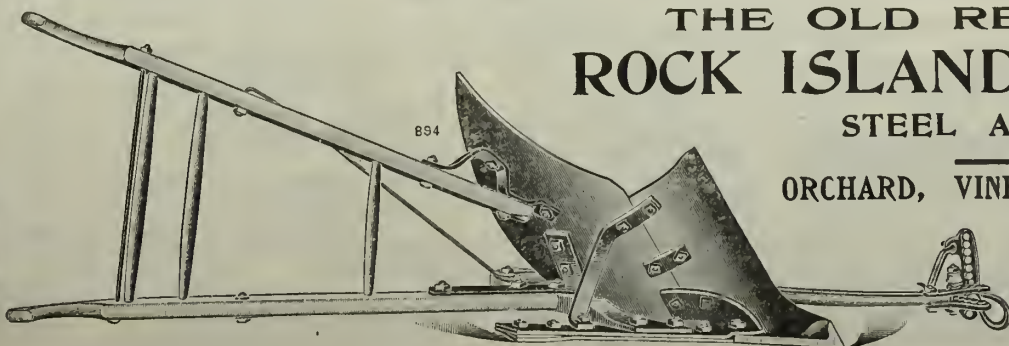
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83 FREMONT STREET, - - - - - SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with Asphaltum.



MONARCH  
Grubber and Stump Puller.  
HOOKER & CO.,  
16 and 18 Drumm Street, San Francisco.

Coughs & Colds  
Cured with R. Hall's Pulmonary Balsam.



## THE OLD RELIABLE ROCK ISLAND PLOWS.

STEEL AND CHILLED

ORCHARD, VINEYARD AND FIELD.

Best Plows.  
Lowest Prices.

WRITE OR CALL.

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222 Mission St., San Francisco

## THE Mutual Life Insurance Company OF NEW YORK.

RICHARD A. McCURDY, President.

Returned to Policy Holders, - \$560,000,000.

This is what the MUTUAL LIFE has done, and still holds securely  
invested for them Assets of over

**\$326,000,000.**

## The Largest Insurance Company in the World.

Its policies embody all the modern and most desirable features of insurance  
or combination of investment with insurance, and at the lowest  
premium, consistent with safety, and provide for—

*Liberal Loans to the Insured;*

*Large Cash Surrender Values, stated in the Policy;*

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Extended Term Insurance;*

*Paying Amount in Installments or in One Sum.*

Its contracts are clear, explicit and businesslike. The company is progressive  
and liberal, conservative and safe, purely mutual, and  
returns all surplus to policy holders.

## A. B. Forbes & Son,

THE MUTUAL LIFE BUILDING,

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## HAYWARD'S PASTE AND LIQUID DIP.

Best and Cheapest on Earth. Agents Everywhere. Positively Prevents and Cures Scab,  
also Kills Ticks and All Parasites Without Injuring the Sheep.

IF YOUR DEALER DOES NOT KEEP IT, ADDRESS

F. B. FINDLEY, Wool Commission Merchant,  
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## BUFFALO PITTS SPIKE TOOTH HARROW.

THE ONLY SPIKE TOOTH HARROW SUITABLE  
FOR ORCHARD OR VINEYARD.

NOTICE THE FRAME—IT WILL NOT HARM THE  
TREES OR VINES.

Made in 2, 3, 4 or 5 sections.

ASK YOUR DEALER FOR IT.

BAKER & HAMILTON,.....SAN FRANCISCO, BENICIA, SACRAMENTO, LOS ANGELES.

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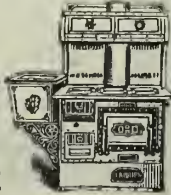
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General Commission Merchants,  
Wholesale Dealers in GREEN AND DRIED FRUITS, POTATOES, ONIONS, BEANS,  
WOOL, BUTTER, EGGS, ETC.

TURKEYS WANTED. POULTRY AND GAME a Specialty.  
N. E. CORNER WASHINGTON AND FRONT STS., SAN FRANCISCO, CAL.

**\$50.00 RANGE FOR \$25.00**

TO INTRODUCE THE

WILLARD STEEL RANGE into every section of the United States,  
we will for a short time deliver at your  
depot free of charge our highest grade Steel range for \$25.00. The regular retail  
price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven  
12 inches high, 17 inches wide and 21½ inches deep, and 15-gallon reservoir.  
Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet.  
Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St.,  
St. Louis, Mo. Dept. 8. Will ship C. O. D. with privilege of examination.





## THE HOME CIRCLE.

## Winter in the Sierras.

The pines are black on Sierra's slope,  
And white are the drifted snows;  
The flowers are gone, the buckthorn bare,  
And chilly the north wind blows.  
The pine boughs creak,  
And the pine trees speak  
A language the north wind knows.

There's never a track leads in or out  
Of the cave of the big brown bear;  
The squirrels have hid in their deepest  
holes,  
And fastened the doors with care.  
The red fox prowls,  
And the lean wolf howls  
As he hunts far down from the lair.

The eagle hangs on the wing all day,  
On the chance of a single kill;  
The little gray hawk hunts far and wide  
Before he can get his fill.  
The snow wreaths sift,  
And the blown snows drift  
To the canyons deep and still.

—Mary Austin in St. Nicholas.

## Three Calls.

"And do you find many changes?"

The girl was leaning back in her chair, thoughtfully regarding the man she had not seen for ten years.

"No, I can't say I do."

"You are changed."

"Am I?"

"You are changed both outwardly and inwardly. Then you were no one, now you are some one."

She looked at him for a moment in silence.

"I wonder," she said at last, "if you find me as much changed as I do you?"

He took advantage of the opportunity she gave him and looked long at her fair face.

He ignored her remark altogether. "Why have you never married?" he asked.

She clasped her hands at the back of her charming head with a little yawn.

"I have been unfortunate," she said. "All the men who wanted to marry me I did not care for, and all of them I did care for did not want to marry me! It is the general 'cussedness' of Fate," she finished with a low laugh.

"I think it is due more to the general 'cussedness' of your own nature," he answered, gravely.

Her dark eyes twinkled. "I am afraid you are out of practice," she said, "in making pretty speeches. And what are you going to do now you are home again?"

"I haven't decided about my future—except in one respect. I hope to marry."

She turned to him in surprise. "Are you engaged, then?" she asked.

He shook his head. "I want to know if you will be my wife?"

A little color crept into her cheeks. "I wish you wouldn't," she said. "You should remember that you were always one of the men I did not want to marry."

"That was in the old days"—quietly.

"Why should there be any difference now? One could not change one's opinion during an hour's call."

"No," he said; it was not so much any change in me that I thought would make you give me a different answer than you did ten years ago as the change in yourself and your circumstances."

"My circumstances are unaltered," she said wonderingly, "and as to myself—"

"You are a good deal older than you were ten years ago."

She flushed.

"Then if you think I have aged so much," she cried, sarcastically, "why do you wish to marry me?"

"I never said I wanted to marry you," coolly. "But occasionally one's sympathies become aroused and carry one away with them in spite of one's self."

Her dark eyes flashed fire.

"Sympathies!" she cried. "Why should I arouse your sympathies?"

"I don't know exactly, but somehow I always feel sorry for girls like you,

who have to give way to a younger generation."

Her hands fell to her sides. The enormity of his words seemed to stun her.

"You are very kind," she cried, ironically, "but will you please remember that I do not require your compassion, though I can never properly express my gratitude for your disinterestedness in asking me to marry you to save me from such an end."

"Not at all"—calmly.

"I may be getting old," she said as he rose, "but I have not sunk quite so low as to require your charity. There are at least four men who would marry me to-morrow if—I consented—men who really want to marry me."

"I don't doubt it," he said, gravely, "and I hope you will forgive me if I have said anything which wounded you. One's sympathies are often misplaced. You will let me come again, won't you?"

"I shall be charmed to see you," with frigid formality, and then she placed a listless hand in his.

But when he had gone she went and peered in the mirror.

"Do I look so old?" she cried, with a catch in her breath; but she looked for wrinkles and gray hair in vain.

"When I refused him before," she said reflectively, "he cried. To-day—he laughed," and she sighed as she turned away.

"It is a long while since you came to see me," she said, as she sat down in her chair after receiving him.

"Yes, a long while. But I have had so much to do that I really haven't had time."

"No?" She smiled, but her fingers were beating an impatient tattoo on the arm of her chair. "I saw you at Hurlingham on Saturday," she went on. You were walking about with a girl the whole afternoon. Who is she?"

"Oh, you must mean little Milly Danvers. Did you notice her? Did you ever see such a pretty girl?"

"Just up from the country, I suppose?"

"Yes; any one could tell that at once with the fresh color in her face."

"It was not her face that made me think so"—scathingly. "It was her hat."

"Her hat?" he repeated, blankly.

"Yes; and the way she put it on. Instead of the hat being on her head, her head was rammed inside her hat. 'By their hats ye shall know them'—scornfully.

He shook his head in a mystified way.

"Men don't notice such things," he said.

"Don't they?"—skeptically. "I think they know pretty well if a woman looks smart or not."

"Smart! Oh, I daresay. But, then, one would never associate such a word with Milly Danvers. Sweet simplicity is her style."

She tossed her head contemptuously. "You called me old the other day," she said, "and now I have discovered it is you who have aged most. It is only old men who discover charms just out of the nursery."

"Milly has left school some months," trying to defend himself; but she only tapped her foot on the ground with some irritability.

"Don't you think we have talked enough about Miss Danvers?" she said. "Let us start a topic of some interest."

"Then we will talk about you," promptly.

She smiled faintly. "I don't think that will be an absorbing subject, either," she said. "Besides it might tempt you to be as uncomplimentary as you were last time, and you would not be so amusing twice."

"Did I amuse you, then?"

"You always amused me—even in the old days when"—with unnecessary emphasis—"you and I were young. Do you remember how you cried then?"

"And did that amuse you? I will cry now if it will give you any pleasure."

"No! I don't believe you could cry now if you chose. I wonder—"

"And what do you wonder?" as she paused.

"I wonder what you would have done if I had accepted you the other day."

"Perhaps I shouldn't have asked you to marry me if I had not been quite certain you would refuse."

Her eyes flashed darkly. "I wish I had said yes."

"I might have kept you to your word, and what would you have done then?"

He was watching her very closely, and she wished her color were more under her control.

She laughed as naturally as she could. "I would have married you out of revenge," she said.

"Well"—in a tone of relief—"all things considered it is much better that you answered as you did."

"Infinitely so," she replied, with perhaps too much emphasis, and she watched him afterward as he walked away from the house straight and tall.

"He is too good for Milly Danvers," she said, with a little strangled sigh.

"Come out on the balcony," she said; it is so stuffy inside."

"You look tired," he said, as she threw herself into a chair.

"I am tired," she cried, "tired of everything; of the eternal treadmill. Surely"—passionately—"one was made for something better than all this."

"Have you only just found that out?"—slowly.

"Only just, and I have had ten years of it, and yet—and yet—I expect I shall come up again next season and do the round just the same."

"Perhaps things will be changed then—perhaps you will be married."

"Never," she said, restlessly. "I shall never marry."

"What have become of the four that wanted to marry you?"

"They have gone, thank Heaven!"

He looked at her intently. "I wonder if ever during your life," he said, "you will regret any of the men you have refused, and wish—you had answered differently?"

She laughed mirthlessly.

"That would be a just retribution for my sins, you think?" she said.

"A man who loved you once would probably love you always."

She laughed again.

"I am afraid you know little of human nature," she said. "Men only too soon console themselves. There is an instance of that close at hand. Look at yourself!"

"I have not consoled myself"—quietly.

She looked away from him.

"How is Milly Danvers?" she asked.

"Milly is very happy. She is just engaged."

Her eyes looked even darker in contrast to the white face she turned to him. But her voice was quite firm.

"Accept my congratulations," she said.

"You are very kind, but—I don't see why I am to be congratulated."

"Naturally"—in a colorless, even voice—"Miss Danvers' engagement implies yours, too."

"It does not," he said, a little whimsically. "You see you were right; I was not old enough for Milly. Her fiancé is ten years my senior."

"I am so sorry for your disappointment," she said, gently.

"A little help is worth a world of pity," meaningly.

"And how can I help you?"

"By taking the disappointment away."

He leaned over the flowers on the balustrade so that he could look the better into her face.

"I am tired of the treadmill, too," he said. "Don't you think we might bear life better if we faced it together?"

She clasped and unclasped her hands nervously.

"I did not mean to arouse your compassion again," she said, with a sob in her voice.

"You have never aroused anything in my heart but—love—"

"You said I was old and—"

"Ah, didn't you see I was acting?" He took her two restless little hands in his.

"Dear," he said "my love has survived the weariness and silence of ten long years—won't you trust me now?"

Her dark eyes were shining through a mist of tears.

"I was afraid—I was afraid," she cried, "that you had gone away from me forever, and until I had lost you I never knew how I loved you—how I wanted you!"—Mabel Robinson in *Mainly About People*.

## When the Gravy's on the Buckwheats.

When the gravy's on the buckwheats and the sausages are hot,  
When the steam is floating upward from the shining coffee pot,  
When the cook stirs up the batter that was set the night before,  
And when little Bob and Clara smack their lips and yell for more,  
Oh, it's then a man is always feeling pretty near his best—

If there isn't any trouble with the works beneath his vest—

And it is then he ought to humbly thank the Lord for what he's got—

When the gravy's on the buckwheats and the sausages are hot.

There's a fragrance that comes floating from the pancakes on the plate  
That should nerve a man to action—make him strong for any fate—

There is joy, there's inspiration in the smears on Bessie's chin,  
And it's good to see dear Willie as he scoops the sausage in,

And what sweeter music is there than the rasping, slapping sound  
That the busy cook produces as she stirs the stuff around?

Oh, each precious, luscious mouthful quickly finds the proper spot

When the gravy's on the buckwheats and the sausages are hot.

—Chicago Record-Herald.

## Curiosity Satisfied.

There are bad bargains that we remember, sometimes with regret and often a little bitter amusement. Says Mrs. E. Gillespie in her "Book of Remembrance":

"My father had taken some land in Illinois for a bad debt, and this he had never visited. After he had paid taxes on it for several years he was asked to sell the tract. He agreed to do it, and named the price, which was the sum he paid for it, without the taxes.

"The deeds were scarcely signed when my father found that a city, Peoria, was growing up on the spot. He was naturally disappointed at what seemed the ill-luck of the occurrence, but several years after his annoyance was tinged with amusement. A man came into his office, and asked:

"'Are you W. J. Duane?'"

"'Yes.'"

"'Did you own the site of the city of Peoria?'"

"'Yes.'"

"'Did you sell it for six hundred dollars?'"

"'Yes.'"

"'The man rose from his chair.

"'Good-by,' he said. 'I only thought I'd like to look at you.'"

FIRST BANK DIRECTOR—"I think we'd better let Collins go."

Second bank director—"Why? He's been our cashier for twenty-five years."

First bank director—"I know; but he's too infernal honest. We don't get a chance to do any flandering.—Harlem Life.

JAGGLES—"I notice that many of our millionaires claim that they don't know how to do good with their money."

Waggles—"I guess that's true. If they had been accustomed to doing good they would not be millionaires."—Judge.

"MOTHER is always telling me not to bolt my food," said a small boy, "and now she has gone and bolted up the cupboard that has got all the victuals."

—Woman's Life.

KWOTER—I tell you, there's truth in the old saying, "If you would have a thing well done, do it yourself." Glo-

ter—Huh! How about a haircut?"—



## DOMESTIC ECONOMY.

## Hints to Housekeepers.

One part plums and two parts crab-apples makes an excellent meat jelly. Tomatoes canned whole make a toothsome and handsome winter salad.

A fine meat sauce is made by adding vinegar and spices to quince marmalade.

Grape jelly should be made when the fruit is just commencing to change color.

Some one who understands the raising of house plants advises that it is a good plan, when seeds are in window boxes or pots for the house, that the earth be first baked thoroughly in the oven. This will destroy all insects and germs of any sort that are likely to injure the plants.

To prevent pudding cloths sticking to the pudding rub them with butter, then dredge them thickly with flour. Rub pudding moulds of tin or earthenware with butter, and then dredge them with granulated sugar. This forms a shining, delicate coat on the outside of the pudding.

A hit-and-miss rag carpet, with striped warp, is much less trouble to weave than one where the rags are woven in stripes. It costs several cents a yard less to weave a rug or a carpet in this way than if the rags are woven in stripes. As a rule, such carpets are more tasteful in design.

To make a cheap floor stain, take two ounces of permanganate of potash, put it into a gallon of water and mix thoroughly until dissolved. Then, with a large flat painting brush, paint evenly all over the boards required to be stained. When quite dry, paint over again, and they will be a good dark brown. Next day give the floor a good polish with boiled linseed oil; the day following with beeswax and turpentine.

Oysters, being both nourishing and easily digested, are often ordered for invalids. However, they do not always tempt a sick person's appetite in their simple, unshelled garb. Make half a pint of good beef tea, thicken it with a little arrowroot to the consistency of cream. When it has boiled let it cool; put in the oysters and let all heat slowly but thoroughly. Do not let it boil. By avoiding this, the oysters will remain quite mellow and tender, and as digestible as if eaten uncooked.

## Domestic Hints.

**PARSNIP FRITTERS.**—Wash and scrape them and cut in slices, cover them with boiling water, cook until tender, mash them through a colander, return them to the fire, add to two large parsnips a tablespoonful of butter, salt and pepper to taste, and one egg beaten well. Mix thoroughly; remove from the fire, and when cool make into small, flat cakes and fry in a little butter; serve hot.

**INDIVIDUAL PEAR PUDDINGS.**—Individual pear puddings may be easily and quickly prepared by this recipe. Wash and core large pears, put them in a shallow baking pan and set in a steamer. When they are tender take out and fill each pear with chopped preserved ginger and its syrup. Arrange them in a dish, sift sugar over them and cover each with a stiff meringue. Set in the oven to brown, and serve.

**HONEYCOMB PUDDING.**—One-half cupful of butter, one-half cupful of sugar, one-half cupful of milk, one-half cupful of flour, one cupful of molasses, four eggs and one teaspoonful of soda; mix the sugar and flour together; add the molasses; warm the butter in the milk, then add the eggs, which must have been well beaten; lastly, put in one teaspoonful of soda dissolved in a little hot water; stir well together and bake half an hour in a buttered pudding dish. Serve hot with sauce. To make the sauce beat the whites of two eggs and one-half cupful of powdered sugar to a stiff froth; add a little wine or lemon juice.

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# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Dec. 11, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	74 1/2 @ 75 1/2	78 1/4 @ 79 1/4
Thursday.....	76 1/2 @ 77 1/2	80 1/2 @ 81 1/2
Friday.....	75 1/2 @ 76 1/2	79 1/2 @ 80 1/2
Saturday.....	76 1/2 @ 77 1/2	80 1/2 @ 81 1/2
Monday.....	77 1/2 @ 78 1/2	81 1/2 @ 82 1/2
Tuesday.....	79 @ 77 1/2	83 1/4 @ 81 1/2

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	May.	July.
Wednesday.....	45 1/2 @ 45 3/4	40 1/2 @ 41 1/4
Thursday.....	46 1/4 @ 45 3/4	40 1/2 @ 41
Friday.....	45 1/4 @ 45 1/2	40 1/2 @ 41 1/2
Saturday.....	46 @ 47 1/2	41 @ 42 1/4
Monday.....	46 @ 47 1/2	40 1/2 @ 42 1/4
Tuesday.....	45 1/2 @ 46 1/4	40 1/2 @ 41

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 03 1/2 @ —	1 07 1/2 @ 1 06 1/2
Friday.....	1 02 1/2 @ 1 02 1/2	1 06 1/4 @ 1 06 1/2
Saturday.....	1 04 1/2 @ —	1 07 1/2 @ 1 08 1/2
Monday.....	— @ —	1 08 1/4 @ 1 10
Tuesday.....	— @ —	1 09 1/2 @ 1 08 1/2
Wednesday.....	1 03 1/2 @ —	1 08 @ 1 07 1/2

\*Holiday.

## WHEAT.

Further strength has been developed in the wheat market since last review, but as is generally the case when values appear to be on the up grade, the improvement was much more marked in speculative operations than in prices obtainable for immediate deliveries of wheat. The Chicago grain board was the focal point of the strength manifested, but the effects were felt to an appreciable degree in all centers. One of the most prominent causes assigned for the advance in the speculative market was that outsiders, farmers and others, had just awakened to the fact that wheat was too low, as compared with values current on other cereals; that owing to scarcity and much higher cost of other grain ordinarily used for feeding stock, more particularly corn, the consumption of wheat was being greatly increased. The explanation savors very much of the sharp practice of some of the big manipulators who are steadily milking the gullible public. There is no denying the fact that wheat is too low in price for the producing interest, and this has been painfully apparent for a long time. But that the sharps and heavy weights of Chicago and other centers were not awake to the opportunity, and were outwitted by outsiders, is the statement that is hard to swallow, and it might be amusing were it not for the fact that a fresh crop of financial wrecks in the speculative arena is likely to be the outcome. To-day (Wednesday) the spot market is moderately firm at the quotations, but in Call Board prices there has been a relapse of nearly 3c from highest point of the week for May wheat.

California Milling.....	1 05 @ 1 10
Cal. No. 1 shipping, alongside.....	1 03 1/2 @ —
Oregon Valley.....	1 02 1/2 @ 1 05
Washington Blue Stem.....	1 02 1/2 @ 1 07 1/2
Washington Club.....	1 00 @ 1 03 1/2
Off qualities wheat.....	95 @ 1 00

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s3d @ 6s3d	6s3d @ 6s3 1/2d
Freight rates.....	40 @ —	35 @ 36 1/2s
Local market.....	98 1/2 @ 1 01 1/4	1 03 1/2 @ 1 05

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.02 1/2 @ 1.04 1/2.
May, 1902, delivery, \$1.06 1/2 @ 1.10.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at \$1.03 1/2 @ —; May, 1902, \$1.08 @ 1.07 1/2.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on Dec. 1st and Nov. 1st:

Tons—	Dec. 1st.	Nov. 1st.
Wheat.....	*124,717	152,350
Barley.....	*53,901	70,294
Oats.....	7,500	7,280
Corn.....	206	220

\*Including 68,077 tons at Port Costa, 55,951 tons at Stockton.

†Including 35,302 tons at Port Costa, 15,386 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show a decrease of 27,633 tons for the month of November. A

year ago there were 185,887 tons wheat in Call Board warehouses.

## STOCKS OF GRAIN IN STATE DEC. 1.

The San Francisco Produce Exchange gives the following totals of the stocks of grain and flour remaining in the State on Dec. 1 for the four years named:

	1901.	1900.	1899.	1898.
Flour, hh's....	140,747	144,108	112,136	122,833
Wheat, ctls....	12,023,650	12,401,980	15,998,280	6,494,800
Barley, ctls....	4,467,300	3,893,840	4,788,280	1,264,300
Oats, ctls....	304,520	200,280	235,760	186,000
Rye, ctls....	158,480	151,040	54,140	38,440

## FLOUR.

There has been a slightly improved tone to the market but no appreciable improvement in quotable rates. Selling pressure has been less pronounced. Stocks are ample, however, not only for immediate needs, but for all prospective requirements of the near future.

Superfine, lower grades.....	22 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

There has been more firmness manifested in the market for this cereal than for some time past. The strength has been most pronounced in the Call Board market, where prices were crowded up in the face of favorable weather conditions for coming crop, giving reason to believe that a project was on foot to scalp some shorts. While the spot market tended against buyers, bids on offerings by sample or prices obtainable for the same, were not relatively as high as were some of the figures current on Call Board for 100-ton lots of No. 1 feed, December and May deliveries.

Feed, No. 1 to choice.....	77 1/2 @ 80
Feed, fair to good.....	72 1/2 @ 77 1/2
Brewing, No. 1 to choice.....	80 @ 87 1/2
Chevalier, No. 1 to choice.....	92 1/2 @ 1 00
Chevalier, poor to fair.....	75 @ 85

## OATS.

Changes in quotable values have not been marked since last review, but there have been no heavy offerings of any description, and conditions in the main have been more favorable to the selling than to the buying interest. Red oats continue in favor, and especially are desirable seed qualities selling to advantage. In the filling of small and special orders, higher figures than are warranted as quotations are being realized.

White Oats, fancy feed.....	1 27 1/2 @ 1 32 1/2
White, good to choice.....	1 23 1/2 @ 1 27 1/2
White, poor to fair.....	1 10 @ 1 20
Gray, common to choice.....	1 17 1/2 @ 1 27 1/2
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 27 1/2 @ 1 32 1/2
Black Russian.....	1 00 @ 1 22 1/2
Red.....	1 10 @ 1 32 1/2

## CORN.

Not much offering, and for choice, thoroughly dry corn the market is firm, but soft and damp corn is not readily placed, some of this sort failing to command from regular dealers the lowest quotations noted.

Large White, good to choice.....	1 40 @ 1 50
Large Yellow.....	1 25 @ 1 35
Small Yellow.....	1 45 @ 1 55

## RYE.

Market is showing a little more firmness, more due to decreased selling pressure than to active inquiry.

Good to choice, new..... 75 @ 80

## BUCKWHEAT.

No evidence of much doing in this cereal, but values appear to be steady.

Good to choice..... 1 60 @ 1 65

## BEANS.

Trade in the bean market has not been active since date of last review. While dealers and buyers were in the main bearish in their views, and not disposed to operate at full current quotations, they were unable to purchase freely of prime to choice qualities at material concessions in their favor. While there are some Small White beans offering, mainly from Southern California, spot supplies are composed largely, as for some time past, of Lady Washingtons, Bayos, Pinks and Limas. Stocks of beans in the State are reported at 477,000 sacks, as against 245,000 sacks a year ago.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	3 00 @ 3 25
Lady Washington.....	2 75 @ 3 00
Pinks.....	1 90 @ 2 10
Bayos, good to choice.....	2 35 @ 2 50
Reds.....	2 75 @ 3 00
Red Kidney.....	3 25 @ 3 50
Limas, good to choice.....	4 40 @ 4 50
Black-eye Beans.....	3 30 @ 3 65
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

Values are fairly steady for Green or Blue, and moderately firm for Niles Peas

at the rates quoted, but there is no active business to record in either variety.

Green Peas, California.....	1 50 @ 2 00
Niles Peas.....	1 60 @ 1 70

## WOOL.

Several of the scouring mills are running on full time and have orders hooked to keep them busy until the opening of the spring season. Beyond this, the market is quiet and is likely to remain so until after the mid-Winter holidays, December and January being almost invariably an inactive period in the wool trade. Values are without quotable change, but are largely nominal. Present offerings are principally heavy and defective wools.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Humboldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 10
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 @ 8 1/2
San Joaquin Lambs.....	7 1/2 @ 9

## HOPS.

Although there are no large quantities offering in this center and stocks in the interior of the State, as also in Oregon and Washington, have been lately greatly reduced, neither local dealers nor buyers on foreign account show any disposition to bid higher figures than they have been offering lately. Only in a small way and for select qualities is it possible to realize over 11c. The last Australian steamer carried nearly 48,000 lbs., or about 250 bales, mainly for Melbourne.

Good to choice, 1901 crop..... 10 @ 12 1/2

## HAY AND STRAW.

The hay market has developed no material changes since date of last review. Arrivals were not particularly heavy in the aggregate, but proved ample for the immediate demand. Values ruled fairly steady, and are not likely to fluctuate materially in the near future. Straw was in only moderate supply and brought in the main full current rates.

Wheat, good to choice.....	9 00 @ 12 00
Wheat and Oat.....	8 50 @ 11 00
Oat.....	6 50 @ 9 50
Barley and Oat.....	6 00 @ 8 00
Barley.....	6 00 @ 7 00
Volunteer.....	5 50 @ 7 00
Alfalfa.....	8 00 @ 9 50
Clover.....	6 00 @ 7 50
Stock.....	5 50 @ 6 50
Compressed.....	9 00 @ 12 00
Straw, 1/2 bale.....	35 @ 47 1/2

## MILLSTUFFS.

The market for all kinds of mill offal is weak and slow, although spot stocks are of quite moderate volume. The quantity of Bran reported in city warehouses on 1st inst. was 305 tons, against 423 tons a month ago. Rolled Barley is higher. Prices for Milled Corn were maintained at about same range as last quoted.

Bran, 1/2 ton.....	15 00 @ 16 00
Middlings.....	17 00 @ 19 00
Shorts, Oregon.....	15 50 @ 16 50
Barley, Rolled.....	17 50 @ 18 00
Cornmeal.....	31 00 @ 32 00
Cracked Corn.....	30 00 @ 31 00

## SEEDS.

Business in this line is far from being active or of heavy proportions. Such transfers as are effected are in the main at unchanged values. There are no heavy spot supplies, and it is the exception where any undue selling pressure is being exerted.

	Per ctt.
Flax.....	2 65 @ 3 25
Mustard, Yellow.....	3 25 @ 3 50
Mustard, Trieste.....	3 00 @ 3 15
	Per lb.
Canary.....	3 1/2 @ 3 1/4
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 1/4 @ 3 1/2

## BAGS AND BAGGING.

The same inactivity previously noted continues in this department, and there is not apt to be any business of consequence for several months to come. Asking prices are without quotable change.

Calcutta Grain Bags, spot.....	7 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	7 @ —
Wool Sacks, 4 lbs.....	35 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 34
Fleece Twine.....	8 1/2 @ —
Gunnies.....	— @ —
Bean Bags.....	5 1/2 @ 5 1/4
Fruit Sacks, cotton, three sizes.....	5 1/2 @ 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/2

## HONEY.

Values for Comb and Extracted remain quothably in same position as for some weeks past, with market rather firm at prevailing prices for choice to select qualities. Spot stocks are not large of any description. A shipment of 100 cases Extracted went forward last week per sailing vessel for Liverpool, and a steamer in the new German line took 265 cases for London.

Extracted, White Liquid.....	5 1/2 @ 6
Extracted, Light Amber.....	4 1/2 @ 5
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	11 @ 12 1/2
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7

## LIVE STOCK AND MEATS.

Market for Beef is firm at the quotations, with offerings only moderate and demand good. Current values for desirable qualities of Mutton are being well maintained. Some extra choice Beef and Mutton, intended for the holiday trade, is commanding above quotations. Veal and Lamb are not in large supply and are not likely to be in the near future. Hogs are arriving in larger quantity than required for packers' immediate needs, values ruling lower for medium and heavy; small are firmer.

Beef, first quality, dressed, net 7 lb.....	7 @ 7 1/2
Beef, second quality.....	7 @ —
Beef, third quality.....	6 1/2 @ —
Mutton—ewes, 6 1/2 @ 7c; wethers.....	7 @ 8
Hogs, hard grain fed, 150 to 250 lbs.....	5 1/2 @ 5 1/4
Hogs, small, fat.....	6 1/2 @ 5 1/4
Hogs, large, hard, over 250 lbs.....	5 1/2 @ 5 1/4
Hogs, country dressed.....	6 1/2 @ 7
Veal, small, 7 lb.....	7 1/2 @ 8 1/2
Veal, large, 7 lb.....	8 @ —
Lamb, spring, 7 lb.....	8 @ 9

## POULTRY.

A fair demand has been experienced for most kinds of poultry, choice young stock receiving, as a matter of course, the preference. Plump Broilers sold to relatively better advantage than Fryers or Young Roosters. If the Broilers were very small, however, they were hard to dispose of, even at low prices. Turkeys were in rather light receipt, and for some very choice Dressed higher prices than quotable were realized in a small way.

Turkeys, dressed, choice.....	15 @ 17
Turkeys, alive, Hens, 7 lb.....	13 @ 15
Turkeys, alive, Gobblers, 7 lb.....	13 @ 15
Hens, California, 7 lb dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 00 @ 5 00
Fryers.....	4 00 @ 4 50
Broilers, large.....	3 50 @ 4 00
Broilers, small.....	3 00 @ 3 50
Ducks, old, 7 lb dozen.....	3 50 @ 4 00
Ducks, young, 7 lb dozen.....	4 50 @ 5 50
Geese, 7 lb pair.....	1 50 @ 1 75
Goslings, 7 lb pair.....	1 75 @ 2 00
Pigeons, old, 7 lb dozen.....	1 25 @ —
Pigeons, young.....	1 75 @ 2 00

## BUTTER.

No improvement to note. Receipts of fresh are on the increase, with demand slow and almost wholly local. A few select creameries are realizing in a limited way comparatively good figures, but for the general run of offerings, both creamery and dairy product, the market is weak and prices are irregular.

Creamery, extras, 7 lb.....	23 @ —
Creamery, firsts.....	20 @ —
Creamery, seconds.....	18 @ —
Dairy, select.....	19 @ —
Dairy, firsts.....	17 @ —
Dairy, seconds.....	16 @ —
Mixed store.....	13 @ 14
Creamery in tubs.....	19 @ 21
Pickled Roll, 7 lb.....	19 @ 20
Parkin, California, choice to select.....	18 @ 19
Parkin, common to fair.....	16 @ 17

## CHEESE.

Choice mild new is not plentiful and is selling well. Market is liberally stocked with well-seasoned domestic and is weak, demand for this description not being active.

California, fancy flat, new.....	12 @ 12 1/2
California, good to choice.....	10 @ 11
California, fair to good.....	— @ 10
California, "Young Americas".....	12 @ 13

## EGGS.

Market has been very much unsettled the past week and some heavy cuts have been made in prices of fresh eggs. Cold storage eggs, Eastern and local, are being crowded to sale in some instances very close to cost.

California, select, large, white and fresh.....	32 1/2 @ —
California, select, irregular color & size.....	27 1/2 @ 30
California, good to choice store.....	25 @ 27 1/2
California, common to fair store.....	— @ —
Eastern, good to choice.....	20 @ 25
Cold Storage.....	18 @ 21

## VEGETABLES.

Onions of choice to select quality are not in heavy supply and are being in the main firmly held; they are more apt to rule higher than lower as the season advances. Green Peas and String Beans continued in light receipt and choice qualities brought as a rule good prices. Quotable values for other vegetables arriving in noteworthy quantity were without marked change.

Beans, String, 7 lb.....	5 @ 7
Beans, Lima, 7 lb.....	3 @ 4
Cabbage, choice garden, 7 lb 100 lbs.....	50 @ —
Cauliflower, 7 lb dozen.....	40 @ 50
Cucumbers, Bay, 7 lb large box.....	50 @ 75
Egg Plant, 7 lb box.....	40 @ 60
Garlic, 7 lb.....	2 @ 2 1/2
Mushrooms, 7 lb.....	



Squash, Marrowfat, $\frac{1}{2}$ ton.....	8 00	@10 00
Summer Squash, Bay, $\frac{1}{2}$ large box..	1 25	@1 50
Tomatoes, $\frac{1}{2}$ large box.....	50	@1 00

POTATOES.

There is a fairly active speculative demand, but beyond this there is not much movement at present, outside buyers being able to operate to better advantage in other sections. Heavy quantities of River Burbanks have been recently purchased at \$1@1.10, the potatoes going into warehouse, awaiting a firmer market. Sweets were held at an advance on figures last quoted.

Burbanks, Salinas, $\frac{1}{2}$ 100 lbs.....	1 30	@1 60
River Burbanks in sacks, $\frac{1}{2}$ cental..	90	@1 10
Petaluma and Tomales Burbanks...	1 10	@1 30
Oregon Burbanks.....	1 25	@1 50
River Reds.....	1 30	@1 50
Sweets, Merced, $\frac{1}{2}$ cental.....	75	@1 00

The Fruit Market.

FRESH FRUITS.

Apples of the best grade are scarce and high, and there is every probability that select qualities during the balance of the season will rule no more favorable to buyers than at present. Common qualities of

Apples are not in heavy supply, but such are in slow request and cannot be said to be salable to advantage. Pears are selling at much the same range of prices as Apples, with market decidedly firm for choice to select, fine Winter Nelis being most in favor and commanding the best figures. Grapes are practically out and no longer quotable. Persimmons sold in the main at low figures, the demand being light. Choice Strawberries were in slim supply and brought good prices. Raspberries were not plentiful, but did not sell at materially better figures than last quoted.

Apples, fancy, $\frac{1}{2}$ 4-tier box.....	1 50@2 00
Apples, good to choice, $\frac{1}{2}$ 50-lb. box..	1 00@1 50
Apples, common to fair, $\frac{1}{2}$ 50-lb. box.	40@75
Apples, Lady, $\frac{1}{2}$ box.....	1 00@2 00
Blackberries, $\frac{1}{2}$ chest.....	7 00@9 00
Pears, Winter Nelis, $\frac{1}{2}$ 40-lb. box....	1 50@2 00
Pears, other kinds, $\frac{1}{2}$ box.....	50@1 25
Persimmons, $\frac{1}{2}$ box.....	40@75
Pomegranates, $\frac{1}{2}$ box.....	65@1 25
Raspberries, $\frac{1}{2}$ chest.....	5 00@7 00
Strawberries, Longworth, $\frac{1}{2}$ chest...	9 00@12 00
Strawberries, Large, $\frac{1}{2}$ chest.....	3 50@5 00

DRIED FRUITS.

The Prune market has been fairly active and shows better condition than at any previous date the current season. Stocks of old bid fair to be soon out of the way. Recent business in old Prunes has been mainly on the 2 $\frac{1}{2}$ c basis for the four sizes. New Prunes are selling mainly on basis of 3@3 $\frac{1}{2}$ c for the four sizes, with small Prunes in lightest stock and commanding relatively the best prices. Market is moderately firm at current figures, with fair prospects for a clean-up of this year's crop before another season opens. Apples are in less active request and firmness not quite so pronounced as lately, but stocks are small. Figs are practically cleaned up. Apricots, Peaches and Pears are mostly out of first hands. With a view to effecting a more speedy movement and timely clean-up, jobbers are shading recent asking rates in some instances a quarter to half a cent, more particularly on Apricots and Peaches.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 @ 7 $\frac{1}{2}$
Apricots, Royal, choice, in sacks, $\frac{1}{2}$ lb..	8 @ 8 $\frac{1}{2}$
Apricots, Moorpark.....	10 @12
Apples, in 50-lb boxes, rings, pressed, fancy.....	7 $\frac{1}{2}$ @8
Apples, 50-lb boxes, rings, pressed, good to choice.....	6 @ 7
Figs, pressed.....	— @ —
Nectarines, $\frac{1}{2}$ lb.....	5 @ 6
Peaches, unpeeled, fancy.....	6 $\frac{1}{2}$ @7
Peaches, unpeeled, choice.....	5 $\frac{1}{2}$ @6
Peaches, peeled, in boxes.....	12 @14
Pears, halves, choice to fancy.....	6 @ 8 $\frac{1}{2}$
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	5 @ 6
Prunes, 4 sizes, in bags, 2 $\frac{1}{2}$ @3 $\frac{1}{2}$ c; 50-60s, 4@4 $\frac{1}{2}$ c; 60-70s, 3 $\frac{1}{2}$ @4c; 70-80s, 3@3 $\frac{1}{2}$ c; 80-90s, 2 $\frac{1}{2}$ @3c; 120s and less, 2@2 $\frac{1}{2}$ c; these figures for 1901 crop.	

COMMON SUN-DRIED.

Apricots.....	6 @ 6 $\frac{1}{2}$
Apples, sliced.....	3 @ 5
Apples, quartered.....	3 $\frac{1}{2}$ @4 $\frac{1}{2}$
Figs, Black.....	— @ —
Figs, White.....	— @ —
Peaches, unpeeled.....	4 $\frac{1}{2}$ @5 $\frac{1}{2}$
Pears, prime halves.....	4 @ —
Plums, unpitted, $\frac{1}{2}$ lb.....	1 $\frac{1}{2}$ @2 $\frac{1}{2}$

RAISINS.

The bulk of the crop is out of growers' hands, and there is a contest between opposing factions of packers to corner the supplies remaining unplaced. Packers have made offers to advance 3 $\frac{1}{2}$ c, which is a cent per pound more than growers have been lately receiving. Seeded Raisins have been marked up fully half a cent and are now quoted firm at 6 $\frac{1}{2}$ c. for 3-crown and 6c. for 2-crown.

CITRUS FRUITS.

Oranges are offering freely and market is weak, with demand slow, the weather being cool and most of the fruit under-ripe. It is announced that tri-weekly auction sales will be again conducted here, commencing the coming week. Lemon market is quiet and for other than most select is unfavorable to sellers. Offerings are largely common qualities. Limes continue in good supply.

Oranges—Navels, $\frac{1}{2}$ box.....	1 25@2 00
Seedlings, $\frac{1}{2}$ box.....	75@1 25
Tangerines, $\frac{1}{2}$ box.....	75@1 00
Lemons—California, select, $\frac{1}{2}$ box.....	2 25@2 50
California, good to choice.....	1 50@2 00
California, common to fair.....	75@1 25
Grape Fruit, $\frac{1}{2}$ box.....	1 00@2 00
Limes—Mexican, $\frac{1}{2}$ box.....	3 50@4 00

NUTS.

Considerable doing in Almonds and Walnuts, but at no improvement on recently current rates. Stocks of Almonds now in first hands are light, and marked reductions in growers' holdings of Walnuts have been lately effected. Peanuts are in fair request at quotably unchanged values.

California Almonds, shelled.....	15 @18
California Almonds, paper shell, $\frac{1}{2}$ lb.....	10 $\frac{1}{2}$ @12
California Almonds, soft shell.....	7 @ 9
California Almonds, hard shell.....	5 @ 6
Cal. White Walnuts, No. 1 soft shell....	8 $\frac{1}{2}$ @9 $\frac{1}{2}$
Cal. White Walnuts, No. 2 soft shell....	6 $\frac{1}{2}$ @7 $\frac{1}{2}$

Cal. White Walnuts, No. 1 hard shell....	8 @ 9
Cal. White Walnuts, No. 2 hard shell....	6 @ 7
Cal. Chestnuts.....	8 @10
Peanuts, California, fair to prime.....	4 $\frac{1}{2}$ @5 $\frac{1}{2}$
Peanuts, Eastern, hand-picked.....	5 $\frac{1}{2}$ @6
Pine Nuts.....	5 @ 6

WINE.

The wholesale market is quiet, in absence of noteworthy offerings. Last year's dry wines are quotable at 25@30c per gallon, with sales in a small way at 5c higher range. This year's dry wines of choice quality will likely command when ready for market not less than 25c per gallon, with probability of sales above and under this figure, as to quality and other conditions.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{2}$ sacks.....	155,151	2,935,167
Wheat, centals.....	292,192	3,504,251
Barley, centals.....	170,436	3,940,054
Oats, centals.....	15,380	563,049
Corn, centals.....	3,935	38,533
Rye, centals.....	1,110	54,588
Beans, sacks.....	17,637	505,907
Potatoes, sacks.....	33,021	702,301
Onions, sacks.....	2,587	132,772
Hay, tons.....	3,162	73,963
Wool, bales.....	841	39,924
Hops, bales.....	423	5,448

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, $\frac{1}{2}$ sacks.....	119,024	2,176,066
Wheat, centals.....	287,313	3,111,682
Barley, centals.....	160,212	3,073,264
Oats, centals.....	—	2,119
Corn, centals.....	311	8,374
Beans, sacks.....	217	16,856
Hay, bales.....	104	5,064
Wool, pounds.....	—	511,316
Hops, pounds.....	1,320	304,766
Honey, cases.....	366	4,863
Potatoes, pack's... 1,277	19,771	49,221

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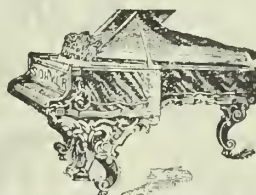
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Sohmer Piano, artists favorite	\$600 to \$1,000
Byron Mauzy Piano, home manufacture	450 to 600
Lester Piano, grand tone	400 to 500
Hamilton Piano, mandolin attachment	350
Spielman Piano, very substantial	300
A New Piano, special	175

SPECIAL BARGAINS

These pianos have been slightly used:

One Sohmer	450
One Sohmer	400
Two Byron Mauzy	350
One Byron Mauzy	300
Two Hamilton	250
On Arion	175
Two Dunham	150
One Weber	125
One Chickering	100
One Hallet and Davis	50

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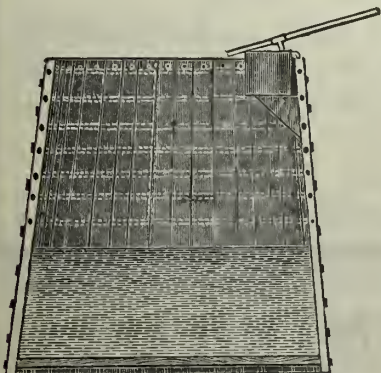
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## THE DAIRY.

### Dairy Advice by University Experts.

Two lines of activity were in the minds of the leading dairymen of our State when they were urging the establishment of practical dairy instruction by the State University. One line contemplated the establishment of a dairy school similar to those which have gained such prominence in the Eastern States; the other was for a dairy instructor to travel about the State, giving assistance and instruction wherever needed at dairies, creameries and cheese factories.

On October 9 opened the first term of the Dairy School at Berkeley, to continue for nine weeks. Thirty-seven students have been in attendance and the work done leaves no doubt as to the necessity and efficiency of the course. There still remains, then, to be determined to what extent the work of giving assistance and instruction at dairies, creameries and cheese factories may be conducted with profit to all concerned. The University is ready to undertake this line of work and the instructor in dairy husbandry will be free to accept calls from January 1 to May 1, 1902. The funds available are limited, but the University will send its instructor, free of expense, to all applicants during this period so long as the money lasts.

The aim in this work is to go to those dairies, creameries or cheese factories that are having trouble with their product and desire suggestions and assistance in remedying defects. Calls may come, therefore, from any creamery, cheese factory or ranch dairy that is making butter or cheese.

A stay of a day or two will usually be sufficient, but the instructor may remain longer if found necessary and other engagements do not conflict. Owing to the large size of our State, the instructor may not be able to make visits just when he is desired; and he may find it necessary to bunch his visits in certain localities in order to save time and expense.

Try to arrange a meeting of the patrons of your creamery or of the farmers in your neighborhood during the time of the instructor's visit, to discuss some of the many problems relating to dairying.

If you would like to have the instructor in dairy husbandry pay you a visit, as suggested, write to him at Berkeley, stating what your line of dairy business is and at what time you would like him to come. Visits will be arranged according to the time desired, as far as possible. Address Leroy Anderson, Instructor in Dairy Husbandry, Berkeley, Cal.

### Creamery Men's Convention.

The annual convention of the California Creamery Operators' Association will be held in the hall of the San Francisco Dairy Exchange, 40 California street, December 26 and 27. The programme follows:

On Thursday, December 26, 9 A. M., delegates to the convention will visit the Agricultural College, Dairy School and Experiment Station of the University of California at Berkeley.

THURSDAY, 2 P. M.—President's Annual Address, Henry F. Lyon, Alameda; Re-

port of Secretary-Treasurer, William H. Saylor, San Francisco; "Scientific Education of the Creamery Operator," Prof. Leroy Anderson, University of California, Berkeley; "What Can the Commission Merchant Do to Aid the Creamery Operator?" George G. Knox, Sacramento; "How Can the Creamery Operator Aid the Merchant?" Thomas Hodge, San Francisco; "Qualifications of the Creamery Operator," H. P. Carpenter, Los Banos.

FRIDAY, DECEMBER 27, 9:30 A. M.—"Care and Repair of Separators," Alphas, E. B. Wiley, San Francisco, Tubulars, G. W. Kneib, Portland, Or.; "Cleanliness in the Creamery," E. H. Zimmerman, Watsonville; "Butter Scoring," W. D. McArthur, San Francisco; "Butter Contests as Educators," W. M. Turner, Sier-raville.

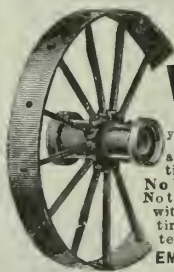
FRIDAY, 1 P. M.—Scoring of Samples of Butter.

FRIDAY, 2 P. M.—"Bacteriology as Applied to Creamery Work," Dr. Archibald A. Ward, University of California Berkeley; "Assisting Our Patrons to Make Their Business Profitable," J. E. Thorp, Lockeford; "Practical Self-Education of the Creamery Operator," George E. Peoples, Fresno; "Convenience in Creamery Construction and Equipment," C. F. Andrews, Point Arena.

FRIDAY, 7:30 P. M.—Annual Banquet.

Creamery operators who wish to have their butter scored should bring samples with them. The judges will fully explain the good and bad qualities to the maker.

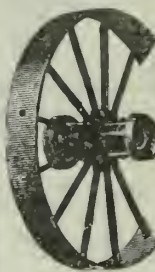
All interested in butter production are cordially invited to attend.



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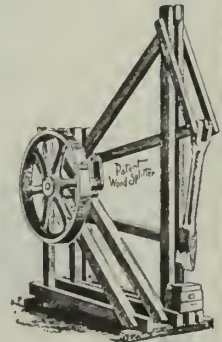


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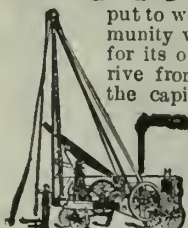
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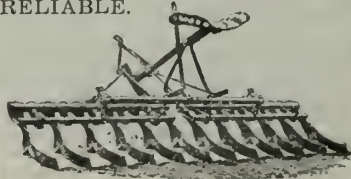
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 25.

SAN FRANCISCO, SATURDAY, DECEMBER 21, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### Erinose of the Grape Vine.

The grape vine is getting its full share of the troubles which befall plant life. Some of these are almost constantly discussed in our columns, others are of rarer occurrence and still others are newly appearing. One of the latter class, which grape growers should understand and be prepared for, is a disease called erinose, illustrated by the engravings on this page. The University Experiment Station has had the trouble under investigation for several years and now publishes a bulletin on the subject prepared by Messrs. Bioletti and Twilight. We trust that such reproduction as we can make from that source may enable our readers to detect the disease if it should appear on their vines next summer.

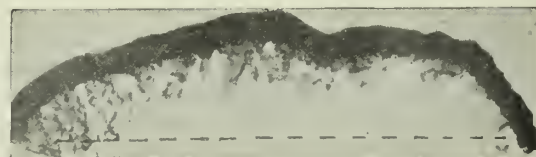
Erinose is a disease of the vine characterized by swellings on the upper surface of the leaves and corresponding depressions on the lower surface. These swellings, when numerous, cause considerable deformation of the leaves, but not the change of color to yellow or brown which is characteristic of most fungous diseases. Even very badly affected leaves retain almost their normal green color until late in the season. The depressions on the under side are coated with a thick felt-like covering, which, at first pure white, gradually turns rusty and finally becomes dark brown. This abnormal growth, in common with similar growths found on other plants, is called an erineum, from a Greek word meaning

woolly. This is the derivation of the word erinose, which means woolly disease, a very appropriate name. The erineum of leaves were formerly supposed to be of fungous origin, but are now known to be due to the attacks of minute mites. The stings or punctures of these mites exert a stimulating effect upon the epidermal cells of the leaf, which causes them to grow out into the abnormal hair-like processes already described. The mite causing erinose of the vine is known as *Phytoptus vitis*, and is related to the mites causing a similar disease of the walnut and the leaf blister of the pear, both of which are very common in California. These mites are extremely minute, and only a practiced eye can perceive them, among the tangled mass of erineum on the leaf, by the aid of an ordinary hand magnifier, and then only with great difficulty. To see them easily, they must be separated and examined with a microscope magnifying at least fifty diameters.

Erinose was formerly considered to be a very serious disease of the vine, owing to the fact that its effects were confused with those of powdery mildew. It is only in exceptional cases that it is, alone, capable of doing serious injuries to the vine or its crop. When accompanying oidium or drought it may, however, perceptibly increase the damage due to these causes. When very abundant, it may seriously interfere with the growth of young vines, but, according to Mayet, never damage old vines, except by interfering slightly with the ripening of the canes or at most causing an almost imperceptible diminution of crop. All varieties of

vines are not equally attacked. The worse cases so far observed in California have been on Flame Tokay and Mission, but it has been found also on other varieties, among them Zinfandel and Muscat.

Since sulphuring the vines for the treatment of oidium has become general in France there has been little trouble with erinose. The phytoptus seems as sensitive to the fumes of sulphur as the red spider, and several sulphurings during the late spring and



Cross-section of a vine leaf, showing erineum in depression on lower surface. The broken line shows the position that this portion of the leaf would have occupied had it not been attacked by the mites.

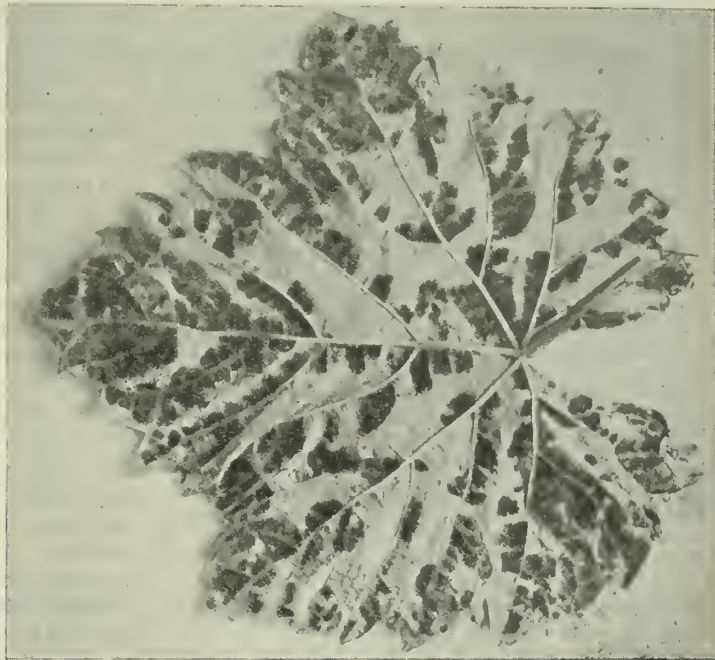
early summer are recommended for the control of the mite. The only vineyards which have been found affected in California are those in which little or no sulphuring has been done, or those where the growth of foliage has been so luxuriant as to prevent the evaporation of the sulphur by the sun. In the latter cases the vines are so strong that they practically receive no harm from the disease.



Vine affected with Erinose, showing leaf swellings throughout.



Vine leaf affected with Erinose—upper surface showing swellings.



Lower surface of leaf, showing brown patches as they appear in autumn.



White patches on lower surface of leaf, in the earlier part of the season.

Badly affected leaf, showing how the erineum extends to upper surface in cases.



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E. J. WICKSON Horticultural Editor

San Francisco, December 21, 1901.

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## The Week.

California was brushed by the pinion-tips of the blizzard which has flown from the unutterable north west over the central regions of the United States during the last week. It was a mild affliction, comparatively speaking, and yet is quite as much as we desire of its kind. It is true that nothing is reported from our valleys lower than 20° above zero, while the Mississippi valley went as much and more below zero, and yet with our season of winter growth the higher figure is lower than we like. There has been some injury in the citrus fruit and winter vegetable districts, but, thanks to the early warnings of the Weather Bureau, those who know how to burn and smoke as an escape from frost effects saved much property and gave a new demonstration of the efficacy of the protective measures which have been brought to high development in California. It is to be hoped that this renewed demonstration may rally the growers in all places where fruits or vegetables are subject to frost injuries into the co-operative frost fighting societies which alone can cover large areas successfully.

Crisp, clear air is characteristic of the California Christmas time, but it seems dispensed in unusual measure this year. For a full week there has been no rain even in the moistest parts of the State. In the drier districts there has been a longer interval. Such weather is generally welcome to dwellers in towns, and they are employing it to the fullest extent in holiday affairs, social and commercial, and as another issue cannot reach our friends before the culmination of Christmas festivities, we take this occasion to extend to all the compliments of the season and earnest wishes for the most manifold repetition thereof.

Wheat has been palpitating all this week and on Wednesday has reached a low stroke; it is still about the same in quotations as a week ago, though perhaps a shade weaker. There has been quite an outward movement: six straight cargoes of wheat and two of mixed wheat and barley have gone forward. These include about 420,000 centals of wheat and 123,000 centals of barley: the latter including 1200 centals by steamer to New York. Barley is more firmly held, but there has been no advance. Rye is also going out: one cargo of 45,807 centals to Belgium and 1300 centals by steamer to New York. Rye is also rather more firmly held, without advance. Bran and other millstuffs are quiet and easy. Stable hay is slacker, but alfalfa has been advanced. Beef, mutton and hogs are all higher. Butter is

moderately firm for fancy fresh, otherwise there is no improvement. Cheese is unchanged, with fair stocks of old but not much new fancy, mild, which is now selling well. Eggs are firmer for fine fresh: stored eggs are the same as before, and there are lots of them. Choice young fowls are in request. Turkeys are rather weak and the outlook is clouded by a trainload of Eastern dressed turkeys expected to arrive before Christmas unless blizzard-struck en route. Speculators are still buying and storing potatoes. Onions have been temporarily unsettled by a heavy delivery of December contract bulbs, but prices are unchanged. Apples are unchanged. Fine pears are very firm and are being brought out of storage. Oranges at auction went low. There still seems to be too much green fruit; fine Navels are in demand and hard to get. Fancy lemons are selling tolerably well, others are neglected. Prunes are moving lively. Trainloads are going and over a million and a half pounds went by steamer to New York. Raisins are higher and trade is fair. The nut market is quiet, but not lower. Hops are still quoted at 5c or 6c higher than buying rates. Honey is moderately firm for the best; 526 cases went by steamer to New York in company with 200 cases put on at Seattle. Wool is just the same. Good demand but little suitable; this makes the spring outlook favorable.

The great effort of the dairy interests of the country to free themselves from competition with disguised oleomargarine is to be repeated in Congress this winter. On the first day of the assembling of the House four bills were introduced. Congressman McCleary of Minnesota reintroduced the original Grout bill, and it was numbered 1 on the calendar; Mr. Tawney of Minnesota introduced a bill similar in all respects to the Grout bill, with the exception of the fact that the one-fourth cent tax on uncolored oleomargarine was conceded. Such concession will strengthen the bill in the Senate. Congressman Davidson of Wisconsin introduced his original bill, taxing colored oleomargarine 10 cents per pound and leaving 2 cents on uncolored; Congressman Henry of Connecticut reintroduced the original Grout bill, and all were referred to the Committee on Agriculture. The National Dairy Union, the push on the producers' side, accepts the Tawney bill which is H. R. No. 4. The Secretary, Mr. C. Y. Knight, informs us that the bill will pass the House by a large majority. The fight will be to get a vote in the Senate. Last winter, with the end of the session fixed by law for March 4th, and with the Senate filled with privileged revenue measures and appropriation bills, a small minority had the majority at its mercy. But at the present session, unlimited in its length, things will be different, and the bill will certainly be acted upon before summer adjournment. Of course everything that any dairy organization or individual can do now with Congress should be done at once.

The national irrigation movement is gaining much headway. The President's message and the annual report of the Secretary of the Interior have very recently called the attention of the whole country to the importance of the subject, and strongly urged that Congress should take action upon it—the reclamation of the arid public lands, so as to open them up to home builders, having been endorsed in the platforms of both the great political parties in the last national campaign. In a nutshell, the central and controlling motive and object of the national irrigation movement is to create millions of happy and prosperous American homes in parts of our territory now utterly desolate and uninhabitable, and to do this in a way that will, beyond all question, benefit every class of our people and every section of our country. The movement is gaining strength with remarkable rapidity as its objects are coming to be generally understood throughout the country.

The annual bulletin describing the seeds offered for distribution by the agricultural department of the University is now ready. Readers of the PACIFIC RURAL PRESS should apply for it by postal card addressed to Prof. E. J. Wickson, Berkeley, Cal. The list contains a large assortment of recently introduced plants, both for forage and green manuring; also a number of forest trees, ornamental shrubs and garden vegetables.

## QUERIES AND REPLIES.

### Probably Lack of Moisture.

TO THE EDITOR:—I am troubled considerably all over my orchard with light colored prunes and I have an idea that my trees need iron. How can I apply iron in the most effective way? I have heard of using copperas, but I understand it is highly expensive and poisonous. My land is mostly chalk and raises very fine fruit, except for the above named fault. The leaves turn a greenish yellow about July, or rather have that color in streaks from the center out while the veins are fairly green. About the middle of prune picking the leaves commence to die from the point down and my prunes are light colored.—GROWER, Los Gatos.

The light color of your fruit and the early turning of the leaves of your trees are probably due to insufficient moisture during the latter part of the growing season. This has been quite a prevalent trouble during the last few years, and the probability is that even with the ordinary rainfall some arrangement must be made to give additional moisture to old bearing trees in many situations so as to enable them to hold the good color of the leaf until considerably later in the season. It would be wise for you to experiment a little next season by application of water to a few trees before the trouble which you describe appears, and then notice how these trees compare with those not irrigated. It is very seldom, indeed, that fruit trees need iron in California, because our soils are so well supplied with this material, and yet some growers have reported good results from the use of it. Your light colored soil may be improved by it. If you wish to experiment on a few trees you can use about a pound of copperas to the tree, scattering it and plowing in when you usually do your plowing in the spring. Copperas is not expensive when bought in large quantities, nor is it particularly poisonous. Another way to get iron is to secure the iron filings and chips from the machine shops, or the sweepings of the blacksmith shops, where iron scale enters largely into the rubbish. Either the water or the iron or both together ought to accomplish the change which you desire to see in your trees, provided they are otherwise thrifty.

### Plants for Drifting Sands.

TO THE EDITOR:—In connection with grazing land in northern Santa Barbara county, I have some land that is good but it is sandy and drifts badly. This year I have tried Kafir corn and sorghum with satisfactory results so far. I expect the stock to eat it off and have it start again from the roots in the spring. It is desirable that the Kafir corn should remain from year to year and occupy the ground permanently. I think it will do so, and the frost will not injure the roots. But I have recently seen a man from Kansas who says the second growth of sorghum is poisonous. Will you give me your opinion about this, and where I can get further information about plants for drifting sandy land?—READER, Santa Barbara.

The problem of establishing forage plants on sand dunes is, as you know, a very difficult one. Your plan to use sorghum or corn for this purpose will not succeed because these plants are annuals, and will not grow the following season from old roots. They will make several growths during their first summer if they are cut back or fed off, but the roots will invariably die during the winter, unless you have an exceptionally warm place, and even then a second season's growth would be a curiosity. Second growth of sorghum means growth immediately after cutting, not a second season's growth. It is dangerous to cattle if they have been kept on dry feed and given too much sorghum at first. If they are fed sparingly at first until they become accustomed to it, there is seldom any trouble. There has never been any poison detected in the plant, although very careful analysis has been made. The Division of Agrostology of the U. S. Department of Agriculture, Washington D. C., is now taking special interest in experiments to determine what can be planted on drifting sand to stop the drifting and to be valuable as stock feed. If you will write to Professor J. Lamson Scribner he will send you his publication on the subject, and possibly furnish you seeds for an experiment of your own under his direction.

### Rusty Grain.

TO THE EDITOR:—Early in October, immediately after the first heavy rains, the ground being thoroughly soaked, I planted my winter grain. It came



up thick and did well till about two weeks ago, when I noticed small yellow spots all through the field. I thought the four weeks of dry weather we had after the planting was the cause of it, but lately we have had plenty of rain and still the yellow patches are spreading, and I fear now the grain will all die out.—RANCHER, Clipper Mills, Butte county.

The sample of grain which you send is affected with rust. This is a parasitic disease of grain and is sometimes quite injurious. It thrives best with a certain combination of heat and moisture. An attack is not serious at this season of the year because usually the temperature is too low. If it attacks grain in the spring it sometimes nearly destroys it. There is nothing that can be done to prevent this disease, because the value of a crop of grain or hay is too small to warrant the use of fungicides. The probability is that your grain will recover from the attack at this time of the year, if it has not already done so. If it does not recover there is no recourse but resowing. Fortunately, as already mentioned, the disease is usually of little account during the winter season.

Root Knot or Crown Gall.

TO THE EDITOR:—Will you tell me what I can do with my peach trees that are beginning to be affected with crown gall or root knot?—READER, Sunnyvale.

This subject has been very fully discussed in our columns, but as there are many new readers in our circle and as the time is present for the work we repeat the advice: Remove the knots with a hatchet or chisel and mallet and paint the wound with Bordeaux mixture, or use a paste made of two parts of bluestone, one part of coppers and three parts of lime, crushing and using enough water to form a paste. The use of this usually stops the diseased growth at that point. In case all may not have it handy we give again the recipe for the Bordeaux mixture:

Lime, four pounds; bluestone (sulphate of copper), four pounds; water, forty gallons. Use part of the water to slake the lime and dissolve the bluestone, which should be done in separate vessels. If put into a bag and suspended near the surface of the water it will dissolve more readily, or hot water may be used in making the solution. Both should be cold when mixed, and the resultant mixture will be a beautiful blue wash. If mixed hot a black compound (copper oxide) is produced, which reduces the value of the wash. After thorough mixing of the solutions water should be added to bring the bulk up to forty gallons.

Roots for Winter Feeding.

TO THE EDITOR:—What kind of roots can be grown at this time of year for hog feed, and what kind will mature in the shortest time? What grass will make the earliest hay?—RANCHER, Visalia.

If you have a light, warm, well-drained soil and the location is not too frosty you can get a good growth of Mangel Wurzel or Golden Tankard beets by sowing the seed at once. It will, however, be towards spring before the beets will be of satisfactory size for feeding. In order to get good large beets for winter feeding the seed should be sown on moist land and previous to June or July. This will give the beets a chance to make good size during the warm months of the autumn and then they can stand in the fall until desired for use, for such frosts as we usually have in California do not injure them for feeding purposes. We know nothing that would be quicker than the beet sown now, but, as said above, they will not grow fast during the cool weather. The earliest grain for hay would undoubtedly be barley.

Eucalyptus Growing.

TO THE EDITOR:—On a very sandy and sunny exposure I planted about 280 blue and red gum trees within the two past years, and I now have 130 of the most beautiful trees, some of them now 10 feet high. All this comes from reading the PACIFIC RURAL PRESS. How can I raise eucalyptus trees from the seed?—READER, Fowler.

You ought to have secured a larger stand of trees. If good trees are planted right, and perhaps given a little water the first year, if the soil is very loose, there ought not to have been so many lost. It is quite a little knack to grow seedlings of forest trees, and it is cheaper for many to buy them at the low rates which nurserymen are willing to take for them when they are taken small in the boxes. Those who are used to handling small seeds, however, or are willing to experiment until they gain experience, can

grow eucalyptus seedlings easily enough. Take boxes about 4 or 5 inches deep and fill with light loam which does not crack or bake, scatter the seeds thinly in lines about 4 inches apart and cover lightly by sifting sand over the whole surface of the box. Keep out of the direct sun and still where warmth will be retained in the soil, and water with a fine hose so that the surface shall not become dry. After the plants appear be careful about over watering, for fear of their damping off. They can grow in the boxes until a foot high, and should then be planted out.

To Graft or Plant Anew.

TO THE EDITOR:—I have some young prune trees on peach root and I want to change them to peaches by grafting. Can I cut them off close to the ground so as to graft into the peach stock? They are about three inches in diameter. Can I grow a successful tree this way, or is it better to pull them up?

Is brome grass all that it is claimed to be in your advertising columns? Can the seed be procured from seedmen in this state?—SUBSCRIBER, Winters.

Do not for a moment think of going back to the peach stock. Graft into the prune wood above the fork or snake them all out and put in good strong yearling peach trees. This last is the best way from all points of view—unless you are a very good grafter and rather enjoy having lots of trouble to secure good uniform trees.

Hungarian brome grass is one of the very best grasses ever introduced for good fall and winter growth and to hold life in the root through the summer in moderately dry land. Some places are, however, too dry for it, or for any other grass for that matter.

Sick Cherry and Grape Vines.

TO THE EDITOR:—What shall I do with a cherry tree that leaves out all right in the spring and then the leaves turn red and shrivel up and drop off? Will cuttings from diseased vines be effected with the disease when grown? Will it pay to plant them?—Campbells.

Your cherry is probably standing in a place where the water gathers in the winter, causing loss of root hairs. There may be no sign of standing water on the surface, but the soil below may be saturated. Dig a hole beside the tree after you have your heavy winter rains and see if the soil is not mud. If the water was longer retained the tree would die from "sour sap." In the case you describe the injury may be only partial, so that the tree may recover. The remedy is an underdrain so placed as to draw off surplus water from this particular spot. As to cuttings from diseased vines they may carry the disease or they may not; it depends upon the nature of the disease. In any case such cuttings are likely to be weak and should not be used.

Pickling Olives.

TO THE EDITOR:—Please give formula for pickling olives. At this season of the year it will be highly appreciated.—CONSTANT READER, San Jose.

Pickling olives is a matter which requires the most careful attention and the exercise of the keenest observation and correct judgment. No fixed recipe or formula can be satisfactory; one must master the principles and modify methods to suit varying conditions. We have already published pages of the most detailed information on the subject to which readers who keep their papers on file can readily refer by keeping the half-yearly indexes. Those who have not preserved the information should apply to the University Experiment Station, Berkeley, for their pamphlets, which cover the whole subject.

Feed and Milk Fat.

TO THE EDITOR:—Can the per cent of cream be increased by better feeding? Please answer through the columns of paper.—SUBSCRIBER, Napa.

Yes, so long as the cow, through lack of sufficient or sufficiently nutritious food, is below her normal or natural ability to secrete butter fat in the milk. As soon as she reaches that she cannot increase her fat percentage, but she may increase her total yield of milk until she reaches her limit in that direction.

Scale on Peach Trees.

TO THE EDITOR:—Please send me a good recipe to destroy scale on peach trees, and when is the proper time to spray them?—OLD SUBSCRIBER, Campbell.

We cannot answer without knowing what scale

you have. If it is the San Jose scale use the lime, salt and sulphur wash. If you have the black scale that is of little account, but good work with the winter strength of the distillate or kerosene emulsion is the best you can do. Always send a specimen when you are not sure of the name of the insect for which you wish a prescription.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending December 16, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Cool weather has prevailed during the week, and killing frosts have occurred in all sections. No rain has fallen. Northerly winds and sunshine have dried out the ground in places where the late rainfall was heavy, and farmers have resumed plowing and seeding. Grain is in excellent condition, and is too far advanced to be damaged by frost. Green feed is still abundant, and stock are in good condition. Tender vegetables were damaged by frost in some places. The cool weather has been beneficial in checking premature budding of fruit trees, and orchards and vineyards are in good condition. The rainfall at this date is somewhat less than the average, and more rain is needed soon in some sections.

COAST AND BAY SECTIONS.

Unusually cold weather has prevailed during the week, and killing frosts have been frequent in nearly all sections. Minimum temperatures are reported as follows: Healdsburg 28°, Hollister 22°, Peachland 26°, Upper Lake 26°. Garden vegetables were killed in some places, and in the vicinity of San Luis Obispo oranges and lemons in exposed places were damaged. Grain and green feed were not injured and are in good condition. Plowing and seeding are progressing, but more rain is needed in the southern counties before this work can be completed. The cold weather has been beneficial to orchards and vineyards. Tree and vine pruning are in progress.

SAN JOAQUIN VALLEY.

The weather during the week has been generally clear and cold, and several killing frosts have occurred in all sections. At Bakersfield on the 11th there was a trace of rain, followed by a light fall of hail and snow. The minimum temperature for four days at Visalia was 22°, and many places through the valley report minimum temperatures of from 24° to 30°. Ample warnings had been given, and citrus fruits and young orange trees were not seriously injured in orchards where smudging was resorted to. Grain and feed continue in good condition, and have not been damaged by frost, although growth has been somewhat retarded. In some of the southern districts the rainfall has been insufficient, and plowing and seeding are progressing slowly, but in other sections this work is being done as rapidly as possible. Orchardists and vineyardists are pruning.

SOUTHERN CALIFORNIA.

Clear and cold weather has prevailed during the week, and killing frosts have occurred in many places. Temperatures as low as 20° are reported in some sections. Oranges have undoubtedly been damaged, but to what extent is not yet known. Ample warnings were given, and smudging and fire-baskets did excellent service. The orange crop is reported as ripening rapidly, and picking and shipping are in progress. Young citrus trees and tender vines and vegetables were injured by the frost. Light rain fell in some sections on the 11th. Grain and feed are in good condition, but need rain. Plowing and seeding are progressing slowly, owing to lack of rain.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, December 18, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week .....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week...	Minimum Temperature for the Week...
Eureka.....	.00	16 01	18.60	14 30	52	32
Red Bluff.....	.00	9 66	8 56	8 16	58	30
San Ramon.....	.00	5 98	7 54	5 78	54	28
San Francisco.....	.00	5 80	7 09	8 13	58	42
Fresno.....	.00	2 17	5 42	5 83	56	28
Independence.....	.00	1 34	2 31	1 64	66	22
San Luis Obispo.....	.00	4 56	10 20	4 95	76	26
Los Angeles.....	.00	2 46	6 79	5 18	82	30
San Diego.....	.01	.77	1 73	2 28	72	36
Yuma.....	.00	.22	.02	1 52	74	24

Contributions Acknowledged.

The PACIFIC RURAL PRESS desires to acknowledge the receipt of the following contributions to the relief of the widow whose situation was so pathetically described in the article "The White Slave" on page 334 of our issue of Nov. 23:

A. Block, Santa Clara.....	\$10.00
Cash, Menlo Park.....	2.00
John J. Booth, Haywards.....	5.00
Judge Hurlburt, San Jose.....	1.00
Mrs. M. J. Worthen, San Jose.....	50
Mrs. A. R. Woodhams, San Jose.....	5.00
R. Husted, San Jose.....	25
Mrs. J. Bennett, San Jose.....	50



## THE STOCK YARD.

### At the Chicago Fat Stock Show.

TO THE EDITOR:—That the International Fat Stock Show at Chicago, the first week in December, was "immense" and has "made history" everyone who saw it will admit. Crowds of live stock men just poured into Chicago, and it is estimated that about 250,000 people attended the show. The numerous hotels of Chicago were taxed to their utmost, and even the stores did a business far greater than they had expected. These men had such "pockets of money" as to surprise the Chicago people, and they even went into the Board of Trade and gave grain prices such a "boost" upward as to surprise the whole country; and, best of all, when it was thought these men were going in still heavier, and the regular trader figured on unloading, these men went to their brokers, got their money and went home.

The meetings of the National Live Stock Association and the numerous breeders' organizations, representing nearly all the different breeds of horses, cattle, sheep and swine, made the visit to the show doubly interesting.

The large delegations of students from the different agricultural colleges were an indication of what these institutions are doing to promote interest in matters pertaining to live stock. These students met one evening and organized the Federation of Agricultural Students of America. The purpose of this organization is to unite in work and good fellowship the agricultural students of this country. Students from a dozen different States were present and several very interesting addresses were given.

Hon. A. J. Lovejoy of Roscoe, Ill., one of the leading breeders of Berkshire swine in this country, delivered the address of welcome.

In the Students' Judging contest the Iowa students carried off first prize.

Of draft horses in harness, the six six-horse teams entered by the different packing houses aroused great interest in the large, enthusiastic crowd along the avenue where they were driven when being judged. Each team was fitted with as pretty and becoming harness as could be had, and drawing a neat wagon, as bright and well finished in every respect as anyone ever saw. The critical task of judging these was placed upon Prof. Curtiss of the Iowa Agricultural College. The Clydesdales recently imported from Scotland, for Nelson, Morris & Co., won first premium. For these it was said that \$6000 was paid. The same parties also won the second prize.

About 300 head of pure-bred cattle of the beef breeds were auctioned off at the sales pavilion, generally at very satisfactory prices. The highest price reached by an Angus was \$1350; Galloway, \$2000; Hereford, \$4500, and Shorthorn, \$6000.

A CALIFORNIA BUYER.—Most of these went to breeders in the corn States. California, however, had one gentleman who understands the value of what was to be offered here. This was Ellis C. Johnson of Staten Island, San Joaquin county. He purchased some of the best bred stock offered, and they will form an excellent foundation for a first-class herd. Some of this stock ought some day to come back and win some of the best prizes offered. California ought to, and can, capture these prizes if she only will. Her alfalfa is a greater plant to build up beef animals than anything they have in the corn States; and after an animal is properly built up it is a comparatively small matter to put on the fat. Corn will put on the fat. Californians can get ahead of the corn States in this matter if they will try to at all. Mr. Johnson has done a great deal for his State and his efforts ought to be appreciated. He expects to take with him three carloads of pure bred Shorthorns to the Golden State.

CARLOAD LOTS.—There were about 300 carload lots of fat stock. Grand championship was won by Texas Herefords, which were fed by Mr. Black of Lyndon, Ohio. They were sold at public auction and brought 12 cents per pound.

THE ENTRIES.—There was a total of 491 exhibits and 2902 entries—1065 entries being of cattle, 372 of horses, 806 of sheep and 575 of swine. No dairy, but some dual-purpose cattle were shown.

COLLEGE EXHIBITS.—The agricultural colleges head fifteen exhibits, all very instructive and interesting. The facts are that people as yet have really no idea of the great work these stations and colleges are doing, and it is an excellent idea for these to get together and compete with one another a little, so that people may see readily what is being done at the different stations. It also enables one to better understand the work when one reads about it afterwards in bulletins and reports. Take, for instance, the work of the Illinois station in breeding corn. It showed just how, by selection and breeding, one may increase or decrease the amount of oil and protein in corn, and thus increase or decrease the feeding value of it or its value for manufacturing purposes. Five years ago scarcely anything definite was known about this; now it is getting to be a study by itself,

and will give special work to men specially fitted for it.

THE CHAMPIONSHIP.—The grand champion of the show last year was the Angus steer Advance; this year it was a pure-bred Hereford yearling steer, Wood's Principal, weighing 1645 pounds and owned by George P. Henry of Goodenow, Ill. The second premium was awarded to the Angus heifer Empress Damask, owned by Collins Dysart of Nachusa, Ill.; the third premium was awarded to the Angus steer Tip Top, owned by S. Bradfute & Son of Cedarville, Ohio.

James Peter of England placed the awards on these cattle and said that he had never seen three better beef animals.

The champion steer was sold at auction Dec. 4 to S. M. Swenson of New York for 50 cents a pound, live weight. S. M. Swenson & Sons are bankers at 15 Wall street, and the roasts and steaks from Wood's Principal will be sent out as Christmas meat to their personal friends.

CORRESPONDENT.

Chicago, Dec. 7.

### Statistics of Live Stock.

At the fifth annual convention of the National Live Stock Association, held in Chicago last week, a paper entitled "The Live Stock Census of 1900" was read by Le Grande Powers, chief of the Agricultural Bureau of the Census Office. Among other things Mr. Powers said that for the first time the census of the United States has attempted a complete enumeration of the domestic animals of the country. Since 1850 the Government had collected statistics of the animals on farms, but no census had ever been taken of the domestic animals not on farms or ranges; that is, the animals in cities and towns and those possessed by small householders scattered throughout the country, but not living upon farms. There were in the country on June 1, 1900, including those on and off farms, 18,172,914 dairy cows; 11,686,829 other cows, kept mainly for breeding purposes; 15,641,480 calves or neat cattle under one year; 7,041,643 steers one and under two years; 5,227,378 steers two and less than three years; 3,141,722 steers three years and over; 1,337,277 bulls one year and over; 7,273,731 heifers one year and less than two, making a total of neat cattle in the United States, June 1, 1900, of 69,522,734. At the same time there were 18,532,137 work horses two years old and over; 1,359,652 colts less than one year of age, and 1,473,461 colts one year and under two, a total of 21,365,250 horses. There were 2,912,958 work mules over two years of age; 255,166 mule colts less than one year old, and 291,458 mule colts one year and over, a total of 3,459,682 mules. There were also 119,992 asses and burros. Of sheep one year and older there were 32,056,129 ewes and 8,060,124 rams and wethers, a total of 40,116,263 wool-bearing sheep. There were also 21,529,062 lambs under one year, making a grand total of sheep of 61,645,325. There were in the country a total of 64,615,363 swine and 1,893,491 goats. The sheep on farms and ranges constituted more than 99.6% of all the sheep in the country. The number of wool-bearing sheep in the United States in the last decade increased from 35,935,364 to 39,936,663, a gain of 11.1%. This gain was confined to one of the five grand divisions of States and Territories, the Western. In the North Atlantic the percentage of decrease was 38.9; the North Central, 18.3; the South Atlantic, 27.4, and the South Central, 46, while the gain in the Western was 104.1. On the ranges sheep husbandry is still a leading industry, and in the Western States we find the number of wool-bearing sheep increasing in ten years from 10,806,990 to 22,211,325. This increase is confined almost wholly to the ranges, and represents in these States the substitution of over 11,000,000 sheep for their equivalent in cattle on the public domain.

## THE DAIRY.

### Milk Fever Precautions Make Fleishy Cows Safe.

TO THE EDITOR:—With the prospects of an early season for grass, the time of year in which milk fever in cows is prevalent is also approaching. There were several articles on the subject in the PACIFIC RURAL PRESS last spring, and in the last one on the subject, if I remember rightly, we were promised another by the same writer on the means of prevention, which, if it appeared at all, escaped my notice. [We presume the writer is still at work upon it.] On the strength of that promise I refrained from writing what I intend saying now in regard to my method of prevention, which, however, is the same as that given by me through your columns some twenty-five years ago—so long ago that the older part of your readers may have forgotten all about it, while to the younger portion it may prove to be something worth knowing. Then, an occasional repetition of a good thing serves as a reminder of things likely to be forgotten which necessity does not call upon one to put into regular practice, and it is better to be reminded

in that way of something one already knows, or used to know, than to be reminded of it by seeing one's best milch cow lying dead.

Everybody who has to do with the management of a dairy of cows is supposed to know that the best are taken by this, to many dairymen, much dreaded disease. That the method I use for its prevention is a successful one is proved by the fact that I have not had a case of milk fever in my own herd for the last twelve years, and then only a slight attack in a ten-year-old cow that had recovered from an attack in the preceding year.

PREPARATORY TREATMENT.—My regular treatment for the last twenty years and more has been to give a cow that is over five years old a dose of one and one-half to two pounds of Epsom salts, two ounces ground ginger and one and one-half to two ounces saltpeter, when I think she is within two or three days of calving, and, if I think necessary, repeat the dose within a few hours after calving, a safe thing to do in any case.

Meanwhile the cow is given a roomy box stall to avoid exposures to either heat or cold, and above all drafts of cold air in the building, is fed a moderate allowance of bran and oilcake and any good hay, excepting barley hay, which should not be used in a case of this kind unless it has been cut when young and quite green, but when cut in that state and well cured is as good hay for cows as any other grain hay. I may add that the salts should be given with not less than four to six quarts of water. One occasionally sees veterinary surgeons recommending salts to be given in one or two quarts of water, which I suppose to mean as little water as can be used in dissolving the same. This I look upon as a mistake, for two reasons, viz.: that both salts and saltpeter being very bitter to the taste, a larger quantity of water not only makes the draft less bitter but adds to its effectiveness as a medicine. I would also say that in giving it to the cow do not hold her head too high, but just high enough for the liquid to run gently down the throat from a strong bottle, by keeping the head as low as possible. There is less danger that any of the liquid will get into the windpipe. Also while giving it keep the head turned a little to the right, as is natural when one holds the bottle in the right hand.

Some may think that there is too much trouble and too many small matters to attend to in following the directions given for the prevention of milk fever, but they should not forget that the successful management of cattle, especially dairy cattle, depends largely on looking after the small things, whether it is better to take that trouble, which really is not much, and save the life of a cow for future use and profit, or to have the satisfaction, if you like, of having to bury her.

SHORTHORNS AS MILKERS.—I said that I had not had a case of milk fever in my herd for the last twelve years, and I may add that the case referred to is the only one I have any distinct recollection of for another dozen or more years.

Now I daresay that some will be saying your Shorthorns are such poor milkers that there is no danger of them having milk fever anyway.

About the first of last March I met with a man who in the course of our conversation told me that he had lost three cows, and a near neighbor had lost two, all having died of milk fever in the space of about three weeks time. They had thought that it was too early in the season and that the grass was not far enough advanced, consequently the unexpected happened. I also heard of others who had lost cows that no doubt could have been saved had proper precautions been taken for its prevention. It was about this time that one of my biggest and fattest cows was due to calve. I treated her in the usual way and she came through all right, and for some time after calving she gave from fifty-five to sixty pounds of milk a day. She calved on the 10th of March, is in calf again since June 11th, and gave exactly twenty pounds of milk in one day, when it was weighed about a week ago, and is fat yet. Since that I have had several other cows calve, varying in age from four years up to fifteen years, that have given from forty to fifty-five pounds of milk a day each. Two daughters of the above named cow, now eight years old, rank among the best of them, so that there is something in the principle of like producing like in milking qualities, as well as meat. As a further proof of this I may state that from the dam of the above named eight-year-old cow I once weighed 1503 pounds of milk in thirty days, May 10th to June 9th, inclusive, 1893, and in turn she had for great grand dam a white cow that I have known give seven gallons of milk a day. That was thirty years ago, and this particular family of Bates bred Shorthorns had the reputation of being good at the pail long before that time.

FLESHY COWS AS MILKERS.—In conclusion, I would say do not be afraid to have a fleshy cow in the dairy; if she is a good milker she is likely to be all the better for being fat; it is like money in the bank, something to draw upon when the time of need comes, yet there are some people who profess to have a great dislike to dairy cows being fat. They ought to know that they are best so, when they can be found, and probably do know better, for I venture to say that nine men out of every ten would buy the



cows they found in best condition in preference to those not so thrifty—the tail end of a herd. There may be a little more risk of milk fever in a fat cow, but that can be reduced to a minimum by using the proper means of prevention.

ROBERT ASHBURNER.  
Lakeville, Sonoma Co., Cal., Dec. 5, 1901.

We are glad to hear from Mr. Ashburner again. Since he moved to Sonoma county he has been very quiet. It is time he began to write again, for the thin cow as a dairy type has had things all her own way for some time.

## THE SWINE YARD.

Fine Poland-Chinas for Sessions & Co.

TO THE EDITOR:—We have just sold to Sessions & Co. of Los Angeles, at a good round figure, five of our prize-winning Poland-Chinas, consisting of the boar Chief Perfection 4th (whose cut we send you by to-day's mail) and sows Best of 1900, Grand Tecumseh, Satin Tecumseh and Silky Tecumseh.

Chief Perfection 4th was first in his class and sweepstakes at State Fair, 1901, and can be fairly claimed to be the greatest show boar ever brought to the Pacific coast. He is a close descendant of Chief Perfection 2d, for whom \$1500 was paid for half

orchard, Mr. Hatch went to experimenting, and several years after it is of record that he had on exhibition at one time 193 different varieties of almonds. From all these he gradually eliminated the poorer ones until he had left six or seven varieties, which were eventually reduced to three varieties consisting of the Nonpareil, I X L and Ne Plus Ultra. These he proceeded to extensively plant himself in various parts of the State; and as the subject attracted more and more attention, and he becoming recognized as an authority, it was but natural that his varieties were mostly planted. To the above enumerated was soon added another variety for general planting that has made its way by sheer force of merit. This was the Drake Seedling, first raised by Mr. H. C. Drake in Suisun valley, and from a tree that was a sport from the roots of a nectarine tree.

Although it would now be possible to get together at least fifty different varieties of almonds during the harvesting season in California for exhibition purposes, some of them having much merit, the above named form the bulk of the almonds planted in or shipped from California at the present time. From this list, for planting purposes, can be eliminated the Languedoc, which is now seldom if ever planted.

BEST VARIETIES.—Which of these varieties are the best to plant? This question cannot be answered correctly without knowing the location, climatic conditions, etc., of the intended orchard. Some varieties do better in one district than they do in another, and some will do well in one district and be a rank failure in all respects in another.

The two most popular varieties, generally speaking, both with the trade and the producer at present, are the Nonpareil and the Drake Seedling. It would not be advisable, however, no matter how sure we were that the particular variety we favored matured to perfection in the chosen location, to plant solid blocks of any one variety of almonds. Too little attention has been paid thus far by the planters of almond orchards to the matter of cross-pollination, so as to have mutually fertile varieties, which bloom at the same time, planted near together. To this fact can be traced most of the

failures in this branch of orchard work. In most almonds there is a tendency to self-sterility, the tendency varying. Like the matter of selecting varieties, no exact rule can be laid down; but this much can be said, that no almond orchard so far has been a success that did not have the opportunity of cross-pollination, either by proximity or through the medium of bees or other insects. When the orchard is a large one, bees and insects cannot perform the necessary work, and proximity is the only remedy. What varieties should be planted in proximity for this purpose cannot well be given, as different kinds blossom at different comparative times in the several districts, and some varieties partake so much of the nature of others as to be entirely useless for this purpose. Experiment and observation are the only recourse.

LOCATION AND SOIL.—As regards location, the best site for an almond orchard is on the first raise of land or lower slopes of the foothills, if the soil be of the proper kind. Such locations are generally the most immune from killing frosts.

The soil should be a sandy or gravelly loam, and the almond will do well in much drier soil than any other fruit. The chosen varieties of nuts should be worked onto the bitter almond stock in the nursery.

The trees in the orchard should be planted at least 24 feet apart and be pruned or cut back the first two years. After this a yearly thinning out and removal of superfluous wood and suckers is sufficient.

HARVESTING.—The harvesting of almonds should commence as soon as the outer covering bursts enough to disclose the almond. Great care should be taken to see that the almonds, after hulling, are fully and carefully dried. When ready to be put on the market they should be carefully bleached. They should not be exposed to the fumes of the sulphur for more than from twenty to thirty minutes, according to the bleacher arrangements. Many almonds are ruined by overbleaching, and, as this process is entirely unnecessary except as a matter of appearance, it is to be hoped some other way of brightening them will be discovered and adopted. It would be better if the system could once be well inaugurated of taking the almonds from the trees to cracking machines, and the kernels or meats alone marketed. It would mean much to the industry. Not only could they be harvested cheaper, but much more satisfaction would be given to the consumer. The demand would be increased, and no further complaint would be heard of rancid nuts.

It will be seen that the almonds most extensively grown at present were originated in this State.

There are several other new varieties, partly without names at present, that give splendid promise of being profitable to producers and acceptable in all respects to the trade, which really means the consumer.

On the whole, the industry yet offers good inducement to those who will go into the subject intelligently and exercise care in selecting the location of the orchard and of varieties, also the planting and caring for the trees in the orchard.

### Instances of Benefit From the Use of Fertilizers.

Mr. G. Cox of Florin, who keeps close track of all that is transpiring in his district, writes to the Sacramento Bee that it is only within the past two or three years that the Florin fruit growers have given this matter any close attention. However, the practice of moving the barn to get away from the manure heap, is not quite so common as formerly.

The following data gathered in this immediate vicinity will demonstrate the utility of using fertilizers in the cultivation of small fruits especially:

FOR STRAWBERRIES.—Mr. B. planted 16,000 strawberry plants. He did not use any fertilizer, and his profits for the season from the said plants did not reach \$50.

Mr. C., B's neighbor, planted 4000 plants of the same variety, using bonemeal fertilizer. His crop of berries was twice the quantity of B's crop, and he (Mr. C.) sold also \$45 worth of plants. Mr. C. gives the fertilizer credit for his success in this instance, and has used fertilizer ever since.

Mr. D. (Japanese) purchased 2½ tons of bonemeal fertilizer at \$20 per ton, and put it on his five-acre patch of Jessie strawberries with the following results: First crop, 22½ tons; second crop, 15 tons; total, 37½ tons.

BARNYARD MANURE AND GRAPES.—A small ranch containing five acres of vineyard had been worked for two years by two different parties at no profit. Mr. E. (Japanese) rented this place. Not being financially able to buy commercial fertilizer he used barnyard manure. A novel spectacle on this ranch in the early part of the year was that of two Japs and a pole, with a sack of manure hung in the center, going to each and every vine. They placed the manure where it would do the most good. Result, 587 crates of grapes shipped, and four tons of grapes sold at \$15 per ton to a winery.

On another small ranch Mr. F. (Japanese) used commercial fertilizers and stable manure and realized over \$800 from the place, while a former renter, who did not use any kind of fertilizer, got but \$90 for his year's work.

I believe the above facts will be sufficient for the present at least to show the benefits accruing from returning to the soil some of the elements necessary to plant life.

### The Outlook for the Prune Industry.

By W. H. AIKEN of Wrights at the Fruit Growers' Convention.

From the standpoint of a prune grower of twenty-five years experience I can say that the outlook for the prune industry is good, with prospect of improvement.

Let us first look back to the origin of the industry in Europe and trace its growth and development, so as to better understand its present importance and future prospects.

A thousand years ago, on their return from the Crusades, the Benedictine monks are said to have brought with them from Turkey or Persia, what was then known as a date plum, and planted it in the garden of their abbey on the River Lot, in the vicinity of Bordeaux, France. Fortunately the soil and climate at that place were well adapted to the successful growth and fruitage of the tree, and fortunately, too, no other people of that time were as interested and skilled in the care and culture of fruits and flowers as the monks.

From their abbey garden the trees were slowly transplanted to others, until in the course of centuries fruit gardens have dotted the hillsides and valleys of that part of France.

True to its origin it has remained a garden tree, for there are, even to-day, no orchards in a commercial sense in Europe.

The fruit became known in trade as Prune D'Ente, or Agen, the prune of commerce, and is the California French prune.

EUROPEAN METHODS.—The European methods of growing, curing and marketing prunes are much the same as they have been for centuries, and we think we have little to learn from them of practical value.

The trees are grown in France, upon the plum root, in light, sandy, porous soils, rich in lime, but deficient in humus, and are trained high, with round tops, so as to let the sunshine in upon the ground to mature garden and field crops.

The prunes, when ripe, fall to the ground and are picked up two or three times a week, and in wet weather every day. The fruit is placed on trays without dipping or grading and baked in ovens with temperature of about 158° F. When properly cured or baked, the prunes are offered in the market places



interest, and of Look Me Over, who sold for \$4500.

The sows are sired by our great breeding boar, Tecumseh Perfection, who has won first in class at State Fair three years in succession and in 1899. He is sired by the greatest Poland-China boar that ever lived, Chief Tecumseh 2d, for whom \$5000 was refused. In the four sows Sessions & Co. secured they have four as grandly bred sows as can be secured. We sold these hogs only on account of wishing to dispose of our entire herd.

We have received good returns from our small advertisement in your paper, and we earnestly wish a happy and prosperous New Year for your paper.

S. P. LINDGREN & SONS.

Kingsburg, Fresno county.

## HORTICULTURE.

### The Almond in California.

By MR. ALDEN ANDERSON of Suisun at the Fruit Growers' Convention.

From the standpoint of the botanist the almond has been classified as a fruit and the tree a native of southern Asia. Its propagation has been extended, however, and it is now extensively raised in all countries near or bordering on the Mediterranean sea in Europe. After crossing the Atlantic a broad leap is made, and the only place in North America where it is raised in commercial quantities, outside of a few in Arizona, is California. It will therefore be seen that it favors a temperate climate and immunity from killing frosts.

HISTORICAL.—The first planting of almonds in this State was generally for ornamental purposes or, perhaps, a few trees for variety in the family orchard. One of the first in California to recognize its commercial value was Mr. A. T. Hatch, then of Suisun, who became interested from observing the fruit of a few trees in his own and his neighbors' dooryards.

This first planting consisted of 200 trees of an imported variety—the Languedoc—as were the first plantings generally, on his home place in Suisun valley in 1872; and, as indicative of the probable life of an almond tree in California, it is interesting to state here that at the most of these trees are yet living and bearing as well now as at any time since attaining bearing age.

Not satisfied with the quality of the output of this



and are bought by prune merchants, as usual, at their own prices.

The prunes are graded, processed, boxed, sacked, bottled or cured, according to quality. The poorer grades are made into by-products, or distilled into brandy, without loss. This economy should be practiced by us. In 1900 the French prune crop was about 100,000,000 pounds and was sold at an average price of 4 cents per pound, all sizes, with little competition from California.

The German prune is raised in Germany for home consumption.

It seems that, commercially, the baked or cured prune is not held in as high esteem in Europe as formerly, the higher classes preferring preserved, canned and bottled fruits and leaving the prune for the middle classes.

This is said to be owing to the fact that the prune is not marketed, as a rule, in a neat, clean, attractive manner, except some of the fine, large grades that are sold, even here, at high prices.

Much the same might be said of the prune business in this country. Some of our rich and well-to-do families live upon the ripe fruits and grapes of our orchards and vineyards in season, and out of season are supplied from refrigerators, and are not sufficiently attracted to our cured fruits to purchase very freely of them.

THE PACIFIC NORTHWEST.—We have an American competitor in the markets of this country, worthy of consideration in fixing prices on California prunes.

The States of Oregon, Washington and Idaho have some 50,000 acres planted to prunes, 2500 acres to French and the remainder mainly to Italian or Fellenberg.

The soil and climate of these States are not specially adapted to the successful culture and fruitage of either of these trees and our enterprising neighbors are now seeking for a hardy and more prolific prune tree, the fruit of which will better stand their frost and rainfall.

CALIFORNIA.—The outlook for all Pacific coast industries is good, with prospect of future development and profit.

The American invasion of the Pacific islands and countries will establish a peaceful commercial supremacy and make profitable markets for our surplus fruit and other food products.

The United States canal will enable us to compete in the markets of Europe and carry the prune war even into France.

In times of peace and practical exclusion from the

markets of the world the California prune growers have planted, watered and cultivated, and have in hand to-day one of the greatest, and probably the most profitable of the industries of the State, and one that is capable of extension and improvement according to the demand for prunes in the markets of the world.

It is not advisable, however, to increase prune acreage of the State very much, till all these things come to pass.

The prune industry of California is only, commercially, thirty years old, and has experienced the fate of other industries in its rewards and losses.

Comparing former with present prices some may conclude that prune growing in California does not pay as well as it did in early years, and complain that they cannot get more than one-half the prices they formerly did.

We must not fail to take into consideration the important fact that the purchasing power of the money we now receive has doubled in the past thirty years. For instance, we now pay for clothes, shoes, sugar, kerosene, tinware, hardware, and furniture for our homes and steel products for the farms, substantially only one-half what we paid when we started in business some thirty years ago.

The wages of labor, however, have kept up to a high standard, making our enterprise profitable at least to the hired man who has proved himself worthy of his hire.

THE CHEMICAL COMPOSITION OF PRUNES.—The Agricultural Department at Washington, D. C., has analyzed prunes grown in France and Oregon, and the State University has analyzed the prune grown in California, so that I am able to submit to you a comparative scientific test of sugar and fruity quality in the prunes of those countries:

French (Imported)—Number per pound, 50; flesh, 87.8%; pits, 12.2%; acid, .56%; sugar, 41.56%.

French (Oregon)—Number per pound, 128; flesh, 78%; pits, 22%; acid, 1.51%; sugar, 35.15%.

French (California)—Number per pound, 45; flesh, 88%; pits, 12%; sugar, 55%.

Italian (Oregon)—Number per pound, 38; flesh, 87.6%; pits, 12.4%; acid, 1.51%; sugar, 35.18%.

The California prune, though raised by me in the Santa Cruz mountains, in Santa Cruz county, may be considered a Santa Clara prune in quality, as the trade pays the same for it. The record shows that the California prune is superior to any other in sugar, which is the standard of excellence, indicating rich fruity quality, and, further, that the French and

Italian prunes grown in Oregon have the same acid and sugar.

Californians, don't get discouraged, but believing that you can produce the best prune on earth, do it bravely and well.

Raise and sell sound, ripe, well-cured prunes that will command full value, and that can be sold by the merchant at a profit and eaten by the consumer with a relish.

Stand up for your State, county, home and business, and make your product a luxury and necessity of life, thus becoming benefactors of yourselves and mankind.

#### Success Against the Black Scale.

TO THE EDITOR:—When that bright and active Horticultural Commissioner, Mr. E. M. Ehrhorn, was speaking in the Fruit Growers' Convention on black scale, I was desirous of adding my mite of experience with that scale on peaches and P. Barry pears, for it seems to favor that pear with special attentions. I turned loose colonies of *Rhizobius ventralis* two successive seasons. They failed to multiply, but the black scale did not. In the fall of 1900 I sprayed with kerosene emulsion, half strength, and early this year with full strength, using the twelve-fold amount of soap, as suggested by Prof. Woodworth in his University bulletin.

I have to report the scale as entirely routed and my trees again clean and vigorous. There's nothing very new about this perhaps, but I was exceedingly glad to realize that I could, with such comparative ease, wipe out the *Lecanium oleæ*; and I am now pleased to recommend the remedy with confidence to my fellow sufferers who still are overwhelmed by untold millions of these repulsive foes.

Carmel Valley, Monterey. EDWARD BERWICK.

HOT WATER FOR VINE ERINOSE.—In severe cases a winter treatment of the vine stumps is practiced in France. This treatment consists in pouring about one quart of boiling water over the stump. For very large stumps a somewhat greater amount of water is used, and for smaller vines a proportionate amount. This method is said to be very efficacious, and with the portable boilers constructed for the purpose two men can treat from 1500 to 2000 vines per day. Cuttings taken from affected vines for the purpose of rooting or grafting may be thoroughly disinfected by placing them in hot water (122° F.) for ten minutes.

# THE PEERLESS SULKY PLOWS.

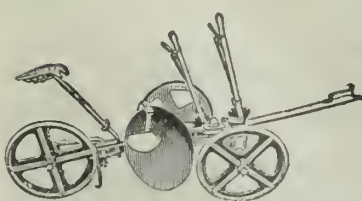
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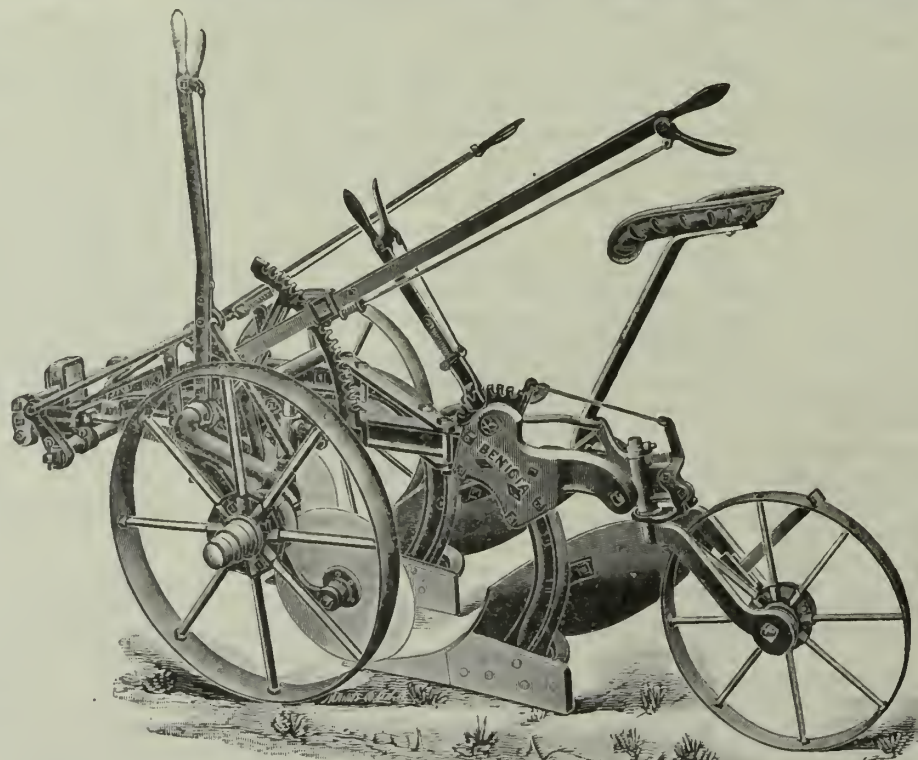


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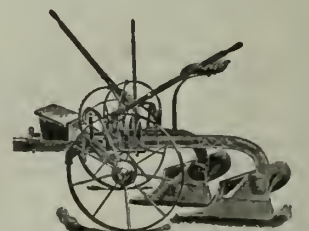
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Manufactory: BENICIA AGRICULTURAL WORKS, BENICIA, CAL.



## Agricultural Review.

### BUTTE.

**ORANGE CULTURE PROFITABLE.**—Biggs Argus: One little Navel orange orchard of one and one-half acre right in the edge of the town of Biggs is producing for the owner this season upwards of 300 boxes of oranges, the first shipments from which brought readily from San Francisco commission merchants \$2.25 per box. At this rate the owner will realize something like \$540 per acre on the present crop, or \$675 income from an acre and a quarter of land.

**CHOICE OLIVES.**—Oroville Register: E. W. Fogg of the Thermalito Olive Farm was one of the first to see the grand future in store for this section in the growing of olives. He was one of the first to plant a grove, to build a pickling works and to establish an olive mill. He is pickling his fruit this year and is meeting with much encouragement. He sent seventy-five gallons to one large dealer in San Francisco and received an order for more. He shipped him 250 gallons and again the word came back, "they gave him unbounded satisfaction. Ship me 200 gallons a week." Produce of a high grade almost invariably finds a prompt and profitable market.

### FRESNO.

**ORANGES A PAYING CROP AT \$1 PER BOX.**—Fresno Republican: There have been about seventy-five carloads of oranges shipped from Sanger up to date, and the owners have realized fair prices. One orange grower in particular has done well with his crop. He has an eight-acre grove near the Carmelita vineyard and he has sold his entire crop at \$1 per box, which netted him some \$200 to the acre, for there were over 1700 boxes gathered therefrom.

**SATISFACTORY RETURNS FOR GRAPES.**—The green grape shipments from the vicinity of Sanger are completed and the total number of carloads during the last two months foot up about fifty. Most of the shipments have been to the wineries of Minturn and Madera. The wine grape growers have done well this year. The net proceeds of the shipments will bring them about \$10,000.

**WEST SIDE PROSPECTS.**—Prospects so far are not very encouraging for crops or sheep feed. We had on December 5th .40 of an inch of rain. This was just about enough to start the feed and that is all. The sheep men are in a quandary about renting the land for feed, as there is nothing in sight yet. The farmers are plowing and seeding, hoping for later rains. About 4000 acres have been seeded so far. George A. Stone, the S. P. R. Co. land agent, was here from the 4th until the 7th, renting land to sheepmen, but did very little business, only renting about 20,000 acres, when in ordinary seasons the S. P. Co. rents the first week about 150,000 to 200,000 acres. There has been several good sales of sheep here in the last week, some 10,000 being sold to Miller & Lux, two and three-year-old wethers bringing \$4 per head. Several thousand head of cattle have been shipped in here from Arizona by S. C. Lillis. These cattle have been taken back into the hills west of Huron, about 15 to 20 miles.

### KINGS.

**THE TILTON APRICOT.**—Hanford Sentinel: Concerning this variety, which is being introduced by J. W. Bairstow of Hanford, Monroe Burrell, who has lived for the past seven years on the place where the original tree is growing, says that during that time it has never failed to bear a crop of fruit. In the year 1900 it had 1200 pounds of fruit on it. In 1899 there was a complete failure of apricots in this locality, but this kind had a crop of 900 pounds on. In 1898 it yielded 1500 pounds. As to size, the Tilton 'cot is one and one-half times as large as the Royal and in drying it weighs heavier than the Royal. It ripens a week or ten days later than the Royal and is a much firmer apricot. One particular feature is that it hangs on the tree much longer after it is ripe before falling. It pits very freely and the tree is a vigorous grower.

### MADERA.

**GREAT LOSS OF SHEEP.**—Madera Mercury: Estebe & Ardaitz, sheep men, who were working south with a large band of fat wethers from San Joaquin county, arrived at Berenda Sunday and rented a piece of barley stubble. There were many heads of barley which had fallen to the ground and the sheep had a great feast, with disastrous results to them. It is estimated that between 600 and 800 sheep died in one day. The owners expect 300 or 400 more to die. H. A. Buchanan hired a number of men to skin the dead animals so that the pelts might be saved. Sheep men state that barley

has often been known to kill sheep, as it ferments, especially after it has been wet by the rains. The rains caused many barley heads to drop and they could not be cut. There was considerable of this among the stubble and the sheep gathered it up, with the result above noted.

### MERCED.

**BIG LAND SALE TO COLONISTS.**—Tulare County Times: A land sale was made in Merced county this week that will be a big thing for that part of the valley. A Wisconsin man bought 960 acres and twenty-four families will occupy it. The purchaser represents fifty other families who are looking for homes in this State and they will probably locate in the vicinity of Le Grand. The land sold for \$30 per acre and it will be irrigated with pumps.

### RIVERSIDE.

**BIG OLIVE YIELD.**—Armada correspondence Riverside Press: The olive crop of the valley is a very large one and the berries of fair size, despite the unusually heavily loaded trees. On some trees every limb droops to the ground with fruit; others look like the heavily loaded black cherry tree, and the olives look as good to eat from the tree as cherries.

### SAN BERNARDINO.

**WATER COMMANDS \$600 AN INCH.**—San Bernardino Sun: E. D. Roberts has sold the Muscott ranch, 30 acres, northwest of the city, to A. A. Cox for \$5100. With the land went six inches of Mt. Vernon water, which is a part of the Lyle creek, right known as the Campbell water, 100 inches of which the city leases and has the option to buy. Another interesting feature connected with this sale is the fact that Mr. Roberts had an opportunity to sell the six inches of Lyle creek water for \$3000, or at the rate of \$500 an inch, but the offer was refused. The city's option on the same water is at the rate of \$600 per inch.

### SANTA BARBARA.

**YEAR'S RUN AT SUGAR FACTORY.**—Santa Barbara Press: The year's run at the Santa Maria beet sugar factory has been very successful and the factory sliced more beets than in the two years previous. In all 36,000 tons of beets were turned into sugar. The average percentage of sugar was .14, and this will be nearly reached in the actual output. The company conducted a series of prize contests for the best beets grown. The result is somewhat remarkable on the face of it, for all of the winners, with one exception, are Chinamen. This is accounted for, not because of the superior agricultural ability of the Chinaman, but because they have paid higher rents than the white men, and have had better land to work. There has been some dissatisfaction with the method of awarding the prizes, and next season the company will inaugurate a new plan, one more fair to all concerned. The district will be divided and the prizes will be based on the sugar in the beet above the standard percentage. There were three series this year in the contest, one for twenty-five-acre fields, another for fifteen-acre fields, and another for ten-acre fields. In the first series the first prize, \$600, was won by M. S. Dutra of Guadalupe; second prize, \$400, Wah Fing. Second series, first prize, \$400, Charles Jung; second prize, \$250, Su Wah. Third series, first prize, \$250, Hus Sing; second prize, \$150, Jim Hoy.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian: Eastern apple shipments for the past week amounted to 47 carloads, making a total of 923 carloads for the season to date. Two carloads of Bellefleurs were loaded here on the 11th inst. This is probably the latest carload shipment of Bellefleurs ever made from this point. Pajaro valley is still shipping out grapes. Santa Cruz county is a great mid-winter grape-growing district. Strawberry shipments have lasted longer this year than ever before. The crop has been good up to this week's frosts, and daily shipments have been made up to date.

### SOLANO.

**WILL PLANT MORE FLAX.**—Solano Republican: H. H. Lamont states that he interviewed the flax growers of eastern Solano county at Rio Vista last Saturday and found them favorable to the idea of planting the Riga flax, so that the fiber as well as the seed may be turned to profit. This season 1000 acres of flax were harvested in that section of the county, and this season's amount will be more than doubled. The farmers have found the industry more profitable than grain, and are going into it more extensively.

### SONOMA.

**A FARMER WINS IN SUIT TO RECOVER ON CONSIGNED DUCKS.**—Santa Rosa Press: Wm. Cook was not satisfied with a check for \$4.93 for four dozen ducks

shipped to C. Bennett, a San Francisco commission man on his promise to pay \$4 a dozen, some three months ago. He brought suit in Justice Latimer's court and Bennett compromised the case, paying the agreed price for the ducks and \$16.50 costs.

**LARGE LAND SALE.**—Petaluma Courier: Brainerd & Veale have completed negotiations for the sale of the 410-acre ranch at Cotati, belonging to the Wickersham estate, formerly owned by Wilfred Page. Price paid was \$16,500. This is one of the largest deals in realty that has been made in this vicinity since the purchase of the Brown tract by Wm. Hill.

### SUTTER.

**PLANTING WINE GRAPES.**—Sutter Independent: Thos. L. Smith, a prominent rancher in Prairie district, is preparing ground to plant five acres of Zinfandel grape roots, and expects to add to his vineyard each year. C. J. Kirk will add about five acres of the same variety of grapes to his thriving vineyard. Mr. Kirk has demonstrated to the people of his district that there is more clear money in grapes than wheat, and many of the farmers in that vicinity contemplate planting a few acres of these roots each year.

**GOOD POTATO YIELD.**—When the recent rise of the Sacramento river occurred, the residents along Butte slough who had potatoes or beans in the field had to hustle to keep the water off the land. The small levees held in most cases and the crops were gathered successfully. Geo. Thompson, who had a small tract of less than ten acres, gathered 1079 sacks of potatoes from the same, which sold readily at \$1 per sack. Last year he harvested over 900 sacks from the same tract. The land is very rich and the only risk is in the overflow before the crops are gathered.

**GOOD SHOWING FOR A CREAMERY.**—Sutter County Farmer: At the annual meeting of the stockholders of the Woodland creamery, the report for the year showed an increase of business over last year at the rate of \$1200 per month. The amount paid the patrons during the year was \$56,176.99, besides paying the running expenses and \$550 dividends to the stockholders. The number of pounds of butter sold was 318,900 at an average price of 21c per pound.

### TEHAMA.

**SHIPMENT OF TWENTY-TWO CARLOADS OF PRUNES.**—Red Bluff People's Cause: An order for twenty-two carloads of prunes for England and Germany has been received at the warehouse here, and the first shipment on the order was made to-day. It is the intention to ship about two carloads each day until the order is filled. The twenty-two carloads will comprise 335 tons or 670,000 pounds.

**RAISING FINE YOUNG STOCK.**—Red Bluff News: W. E. Conard, of the Gerber & Conard Stock Farm at Paynes creek, says this year they have raised fifteen fine Hereford bulls and the same number of Durhams. They also raised twenty head of thoroughbred Poland-China boars.

### TULARE.

**LARGE ORANGE ORCHARD.**—Exeter Sun: The largest orange orchard in this State owned and operated by one person lies just northeast of Exeter, and is known as the Bonnie Brae. This orchard lies partly on the plain and partly on the hill lands, and contains 345 acres of old or bearing trees and 317 acres of young trees, which have not yet come into bearing. From this one orchard about 100 carloads will be shipped this season, over forty cars having been shipped already. The fruit is in a very good state this year for shipping, being more of the required size than former years. About twenty-five men are given employment the year round on this ranch, and when picking time comes every year the number is increased by seventy-five to one hundred pickers. Besides the orange acreage there are seventy acres planted to Emperor table grapes, forty acres to pears and fifty acres to olives, all of which are doing well. It is the intention of the manager, Mr. George T. Frost, to plant the Patton hill, 300 acres, recently acquired, to oranges next spring, making 962 acres planted to oranges.

### VENTURA.

**THE STEAM PLOWS.**—To the Editor:—Yesterday I saw the steam plows recently mentioned in your columns at work at Oxnard on the Patterson ranch. They are doing very pretty, even work, and are reported a great success, at much less cost than team work. They are now plowing 15 inches deep and only using the three-gang plow, covering only fourteen acres a day, but with only seven men and two teams for water and oil. On that land it takes seventy horses (seven teams

of ten) and fourteen men to cover the same ground, and they could barely get it as deep. The five-gang plow, used for ordinary depths, will cover over twenty acres per day.—Cor. Montalvo.

### The Sale Saturday.

There is no denying the fact that the trotting horse industry is booming at present and will continue to do so. The demand for grandly bred driving horses far exceeds the supply, and now is the time for farmers to secure a few choicely bred mares for breeding purposes. On Saturday, December 21st, there will be sold at public auction in San Francisco about twenty head of standard trotting mares in foal to McKinney, 2:11½, the leading trotting sire in the United States; Iran Alto, 2:12½, and Boodle, 2:12½. Most of these mares are by Nutwood, 2:18½, Director, 2:17, Guy Wilkes, 2:15½, Piedmont, 2:17, and as this is a closing out sale of all the horses belonging to Jas. Rea of the Vendome Stock Farm, San Jose, it affords an opportunity to purchase the best horses at the lowest prices that has been offered in this city for years. Send for catalogues to Wm. G. Layng, live stock auctioneer, 721 Howard street. The mares are now at the salesyard.

### How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

E. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRAU, Wholesale Druggists, Toledo, O. WALKING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

Hall's Family Pills are the best.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

## DIVIDEND NOTICE.

### San Francisco Savings Union.

SAN FRANCISCO SAVINGS UNION, 532 California street, corner Wehh.—For the half year ending with the 31st of December, 1901, a dividend has been declared at the rate per annum of three and forty-two one-hundredths (3 42-100) per cent on term deposits and three (3) per cent on ordinary deposits, free of taxes, payable on and after Thursday, January 2, 1902.

LOVELL WHITE,  
Cashier.

## DIVIDEND NOTICE.

### German Savings and Loan Society.

THE GERMAN SAVINGS AND LOAN SOCIETY, 525 California Street.—For the half year ending with December 31st, 1901, a dividend has been declared at the rate of three (3) per cent per annum on all deposits, free of taxes, payable on and after Thursday, January 2, 1902.

GEORGE TOURNAY,  
Secretary.

## Sugar Prune and Cling Peach Trees for Sale.

I have the largest stock of Sugar Prune trees for sale in the State. Grafting wood in quantities at 5c per foot. Send for my descriptive catalogue.

C. W. REED, Mills Building, San Francisco, Cal.



## THE HOME CIRCLE.

## Chris'mus Gif!

## I.

Chris'mus gif, ol' moster! heah we is in line:  
All dese pickaninnies, f'um heah ter der, is mine!  
Ain't no better tu'n-out in all the lan' dan dis:  
Chris'mus gif, ol' moster—Chris'mus gif ol' miss!

## II.

Chris'mus gif, ol' moster, fer ever li'l' lamb;  
En don't forget the mammy; en de ol' man want his dram!  
He ain't no drinked none sence Chris'mus a year ago f'um dis:  
Chris'mus gif, ol' moster—Chris'mus gif ol' miss!

## III.

You 'member w'en de war wuz, en you gone away ter fight,  
En lef' de ol' plantation? Dar wuz mo'nin' day en night;  
W'en you kiss de li'l' chillun, en march wid sword en gun,  
You tol' me ter take keer of dem, en dat des what I done!

## IV.

En w'en come you wuz wounded, en come home f'um de fight,  
De ol' man lif' you in his arms, en nussed you day en night;  
En still stay by you w'en dey say my people's time wuz free  
En dey follered Mister Sherman on de big road ter de sea.

## V.

Chris'mus gif, ol' moster! De fiddle gwine ter play  
De ol' time Georgy breakdown, en "Chillun, Cl'ar de Way!"  
En you gwine ter see some dancin' w'on I flings my foots—lak' dis!  
Chris'mus gif, ol' moster—Chris'mus gif, ol' miss!

—Frank L. Stanton, in Frank Leslie's for December.

## Ebenezer Green's Turkey.

**A**FTER a stormy week the heavens cleared and then, oh, it was glorious Christmas weather; sunshine and blue skies and a nipping frosty air that whisked about, tweaking noses and flapping cheeks until they bloomed like peonies! Church was out, and a stream of people poured along the streets in the merriest humor imaginable, for bless us all! it was Christmas Day, and their hearts were aglow with the spirit of peace on earth and good will toward men. The youngsters went hurrying homeward with skates slung over their shoulders, of the new and glittering pattern especially delighted in by Santa Claus, for fine as the ice was the ringing of the noontide bells had called up visions of turkey and stuffing, plum pudding and mince pie which no mortal boy could resist.

As for the little girls in the new hoods and mittens and muffs they had found in the chimney place this morning, between vanity and appetite they stood irresolute at their own front gates such happy, rosy, chubby creatures, that everybody smiled involuntarily at sight of them. The policemen on the corners slapped their arms about like windmills to keep themselves warm, grinning from ear to ear just because it was Christmas Day. And over all pealed the joyous music of the bells in carols that found an echo on every lip.

Even the houses wore gala air. Wreaths of evergreen hung in all the windows, high and low, and the market on the corner was a thing of beauty and a joy forever, with pies of crimson cranberries, golden pumpkins, silver turnips, celery, apples, pears and nuts heaped picturesquely behind its frost-etched panes of glass, and the whole framed in graceful festoons of ducks and chickens.

It was a triumph of art. No wonder the passers stopped in spite of their hurry to gaze upon it for the thousandth time, and fall to speculating as to what had become of its two crowning glories, the biggest turkey on record and the smallest, which had hung there side by side for a week past

in a contrast at once the joke and admiration of all beholders.

Popular belief held that the monster, the thirty-pounder, had been purchased by old Ebenezer Green, the rich and crusty bachelor who lived by himself in a big house on the outskirts of the town, for he was the only person who could have afforded to buy it in such hard times. But the little one? There was hardly more meat on its tiny carcass than on a spring chicken. Who had a family small enough to get a Christmas dinner out of that?

Ebenezer Green had been asking himself the very question as he sat by his fire that noon, now watching the flames leap up the chimney, now turning to glance at the woman who presided over his housekeeping, laying the table for his holiday feast—a feast, alas! of solitary splendor. He had been struck all at once at the absurdity of setting such a gigantic bird before a single person and when he saw a platter half as large as the table taken down from the closet where his mother's blue and white Canton china was stored, he fell into a silent fit of laughter.

The woman nodded grimly, with a quick appreciation of the situation. "Tis funny, I declare," she said presently, pausing as she reached the door with the great platter in her arms, "but the funniest part of it all is that the little feller is a cookin' this minute next door where they've got six mouths to fill besides their own. 'Tis, honest Injun!"

"Next door?" Ebenezer glanced up inquiringly. "Yes. In the cottage on the east side."

"Why, it's tumbling to pieces. 'Tisn't fit for anybody to live in."

"Well, folks moved in a month or so ago, respectable looking, but I guess they are about as poor as can be. He's out of work and he helps about the house, handy as a woman, and she takes in sewing. There's a parcel of children and I don't believe they ever have a good square meal among 'em. Think o' them setting down to-day to that mite of a turkey!"

And Ellen chuckled at the picture.

"How do you know they have that turkey?" demanded the old gentleman, more impressed than he would have liked to own by the curious coincidence which had kept the two fowls still near neighbors.

"The boy told me that brought ours last night. It seems he chores for the market sometimes, and they gave him the little turkey when they found there wasn't any prospect of its being bought. But, land's sake! I smell something burning!" She hurried off in a flutter of anxiety. A Christmas dinner of all dinners to be spoiled!

Her master rose and slowly crossed the hall. He had been a handsome man in his day and, though his hair had whitened and his shoulders bowed under the burden of years, he was still an imposing figure. He had few acquaintances in the town and was regarded with awe, principally on account of his wealth, which was reputed to be fabulous, but not a little because of a somewhat reserved and haughty air.

He made his way deliberately toward the sitting-room, a spacious, comfortably furnished apartment, with windows looking out upon the shabby, weather-beaten cottage in which the other turkey was to end its mortal career. Sure enough, there were unmistakable signs of occupation about it. The neglected garden had been put in order, the broken gate repaired and rehung, and a general air of neatness gave a new interest and attraction to the little house long empty and unnoticed. The shades were drawn high to let in all the warmth of sunshine of the happy holiday, and Ebenezer Green could see what was going on in the room as well as if he had been one of the busy people in it.

Busy they were, for the table was spread with a clean, white cloth, and the father, with a troop of excited children to help, was at that instant engaged in the thrilling occupation of taking up the children's dinner. The mother, pale, thin and sweet-faced, was

evidently the guest of honor, ensconced in the one comfortable chair, with a cushion at her back and watching the proceedings with a charming smile, half amused, half melancholy. The eldest boy, a tall lad of twelve, who did the chores at the market, filled the glasses with water, fresh drawn from the well. Two gleeful little girls danced in with dishes of potato and turnip, and a brace of chubby youngsters in much-patched trousers trotted after with the bread and butter, proud to assist in serving of such a feast. And, last of all, the father appeared in the doorway, enveloped in a big white apron, to be greeted by an uproarious shout of delight. For he bore on a platter!—ah, me! such a tiny platter!—the crowning splendor of the day, the turkey done to a turn and smelling more deliciously than ever a turkey smelled before, as the whole family unanimously agreed. There was gravy, too, in a funny china pot with a large handle, and who brought that in, feeling the importance of the occasion to the utmost, but the baby, toddling along as gravely as a judge, deep anxiety in her blue eyes. And cider? A whole quart in the big white pitcher! Extravagance which could only be justified by the recollection that it was Christmas Day.

And now the father laid aside the apron. The cook vanished; the head of the household appeared. He led the pale mother tenderly to the table and the children followed, prancing to their places round the large table, which nobody thought bare or poorly set forth. There came a pause for a moment—the little heads, brown, black and flaxen, were bent silently over the plates while the father asked a blessing and thanked God for his goodness in keeping them all together and giving them so many comforts. And then he took up the carving knife as he gazed anxiously at the turkey! The revel was about to begin.

Ebenezer Green turned away with a sigh. The bell had sounded in his own dining-room, and standing on the threshold of that apartment he bent a fixed stare upon the table, where there were flowers and silver and cut glass and on the side table, smoking hot and browned till he cracked all over, loomed up the mighty outlines of the prize turkey. For one man! All at once the oddest idea popped into the head of that one man. If he had stopped to think about it nothing would have happened, and the prize turkey would never have played a part in a story. But for once in his life the old man acted upon the spur of the moment. He hurried out into the hall, put on his coat and hat, opened the door, slipped back into the dining-room and took up the platter from the table.

Oh, but that was a monstrous bird! Thirty pounds? Fifty! Old Ebenezer fairly staggered under its weight as he cautiously picked his way over the ice and snow toward the cottage door, and he couldn't even spare a hand to knock. The toe of his boot managed to make a good, smart rapping, however—a sound so unwonted that the father ran hastily out, with the children trooping in his train.

"Good day!" gasped the visitor, quite out of breath, after his herculean efforts. "Good day! and wish you merry Christmas. You don't know me, but I'm your next-door neighbor, Ebenezer Green. I've got the prize turkey, but I want you to help me eat it, for I am very lonely over there all by myself. Can I come in?"

Come in? Well, the father saw in a trice how it was, and he opened wide to let in the turkey and its bearer, not to speak of a rush of crisp, chill air. The spirit of good-will stirred in his heart and, forgetting the disparity of wealth and poverty between them, he felt only a warm throb of sympathy for the solitary old man. The mother stepped forward—kindly, gently, in a simple courtesy which would have become a palace.

"You need not have brought your dinner with you, sir," she said, smiling. "You are quite welcome to a share of ours on Christmas Day. Jimmy, put on a plate for the old gentleman, and John," turning to her husband, "do

not let him hold that heavy platter. Oh, what a turkey! He must have been raised in a land of giants!"

So, once again it chanced that the big turkey and the little one were side by side. The cottage was very soon a scene of riotous enjoyment, for Ebenezer's spirits rose at a bound and he felt like a boy again. He sent Jimmy back with a note to his housekeeper, who thought he had suddenly become mad when she found not only him but the turkey gone. Over went the flowers and the nuts and the raisins, the apples and pears and grapes, the mince pies and the plum pudding, from the great house to the small, and the children, who had not had a good, square meal for weeks, sat down to a board fairly groaning under the weight of the good things on it. The little boys ate till they could barely see. The little girls were nearly distracted between admiration of the pink roses nodding in the tall vase on the festal board and astonishment at the pudding when Mr. Green set it to blazing in burning brandy. And the father and mother wondered how their neighbor had ever got his reputation of being stiff and proud. Never had so delightful a guest descended into their modest household before.

They all put in and washed up the dinner dishes afterward. The father washed and Ebenezer Green wiped, wishing the directors of the bank could see him, and the young feet tripped briskly to and fro until everything was in its place, clean as clean could be. It was a real frolic. Then they drew up around the fire. The big logs had gone from Mr. Green's cellar not many minutes before Jimmy had worn a path through the snow to the house next door. It was story-telling time, and in the cheery glow on the hearth the father poured out his soul, and told how he had been thrown out of work by the closing of a factory, how hard he had tried to find another place, but to no avail, and how all they had to live upon was the sum his dear wife earned by sewing and Jimmy's pittance from the market. And the wife, in her turn, told how brave and patient he had been, with a loving glance that made him blush with pleasure. And Mr. Green promised that he should have something to do by New Year's day, and gave his word upon it, feeling for the first time how much real happiness a rich man has the power to create.

Then it was his turn. The children gathered at his knee to drink in breathlessly his tales of travel by land and sea, of strange countries he had seen and people he had known—queer, quaint people in far-off places, whose customs and history sounded like the most entrancing of fairy tales. The baby drew nearer and nearer, and finally climbed upon his knee, listening with her great blue eyes wide open. When it was her bedtime she laid her cheek upon his in a soft caress.

"She loves you," they said, and in a burst of laughter was led away—not far, for the house was very tiny. Her childish voice could be heard prattling on while the elder sister made her ready for bed, and then the group outside fell into silence while the little one knelt beside her crib and murmured the dear familiar words of her "Now I lay me down to sleep."

Oh, that was a happy Christmas Day! As it drew toward its close Ebenezer Green lingered in his sitting-room bare and empty after that he had left so full of love and cheerful content. The fire leaped and flared, and threw its rich light into the shadows round his chair. He felt the baby arms still round his neck, the dimpled baby cheek pressed close to his own, wrinkled and seamed with the cares of the world, and when the chimes rang out at midnight soft and clear the old man bowed his head and for the first time in many a year he breathed a little prayer.—Boston Herald.

MR. DUKANE—How do you account for the longevity of Methuselah and the other patriarchs? Mr. Gaswell—Oh, that was before so many new diseases had been invented.—Pittsburg Chronicle-Telegraph.



### Santa Claus on the Train.

On a Christmas eve an emigrant train  
Sped on through the blackness of night,  
And cleft the pitchy dark in twain  
With the gleam of its fierce head-light.

In a crowded car, a noisome place,  
Sat a mother and her child;  
The woman's face bore want's wan trace,  
But the little one only smiled,

And tugged and pulled at her mother's  
dress,  
And her voice had a merry ring,  
As she lisped, "Now, mamma, come and  
guess  
What Santa Claus'll bring."

But sadly the mother shook her head,  
As she thought of a happier past;  
"He never can catch us here," she said,  
"The train is going too fast."

"O, mamma, yes, he'll come, I say,  
So swift are his little deer,  
They runs all over the world to-day,—  
I'll hang my stocking up here."

She pinned her stocking to the seat,  
And closed her tired eyes,  
And soon she saw each longed-for sweet  
In dreamland's paradise.

On a seat behind the little maid  
A rough man sat apart,  
But a soft light o'er his features played,  
And stole into his heart.

As the cars drew up at a busy town  
The rough man left the train,  
But scarce had from the steps jumped  
down  
Ere he was back again.

And a great big bundle of Christmas joys  
Bulged out from his pocket wide;  
He filled the stocking with sweets, and toys  
He laid by the dreamer's side.

At dawn the little one woke with a shout,  
'Twas sweet to hear her glee;  
"I knowed that Santa would find me out;  
He caught the train, you see."

Though some from smiling may scarce  
refrain,  
The child was surely right,  
The good Saint Nicholas caught the train,  
And came aboard that night.

For the Saint is fond of masquerade  
And may fool the old and wise,  
And so he came to the little maid  
In an emigrant's disguise.

And he dresses in many ways because  
He wishes no one to know him,  
For he never says, "I am Santa Claus,"  
But his good deeds always show him.

—Henry C. Walsh.

### Why Women Have the "Blues."

"Why do so many women have melancholia?" repeated the doctor, who has a large practice among the "depressed" and "nervous" feminine population. "Because they don't care to avoid it. Because they absolutely disregard the rules of mental and physical well-being. Because they would rather eat what they like and suffer indigestion and the blues afterwards than to eat what is good for them, but doesn't tickle their palates. Because they'd rather sit about on soft cushions than take a tramp six miles through the open air. Because they haven't enough to occupy their minds and their hands."

Then the doctor paused to take breath, and began somewhat less aggressively:

"It is never the women who have cause to feel blue," he said, "who indulge in blues. The women who have shiftless husbands, hard-hearted landlords, sick babies, and all the usual accompaniments of poverty, never grow so depressed that they have to be treated for it. They are too busy. It's the woman with an adoring family, social position and a comfortable income who doesn't find life worth living. It isn't the servant girl who gets up at six to kindle the fire and who slaves all day who indulges in melancholia, but it is the daughter of the family, who arises at eight, dawdles over her breakfast, reads a little, practices a little, shops a little, craves excitement with all her heart, and is melancholy because she doesn't have it.

"There is no habit which grows upon one so rapidly," went on the doctor. "It becomes a disease in a very short time. My own plan, whenever I feel an attack coming on, is to put on my walking boots and tramp vigorously as

far as I can. It is simply impossible to exercise and feel blue at the same time. Of course, a general care of the health is necessary, and work is the chief factor in effecting a cure. Every woman who has a tendency to melancholia should have an occupation which, if it doesn't entirely absorb her, will at least keep her busy. And she should give her mind up to practical rather than theoretical affairs. She should study how to put an extra shelf in the cupboard, or how to stop a squeaking door, or how to make an overshoe that won't come off at the heel, rather than the teachings of the theosophical school or the philosophy of Herbert Spencer. Ordinarily good health, plenty of exercise, plenty of work, and an interest in the affairs of this world are the great preventives and cures of melancholia."

—London Doctor.

### A Christmas Tune.

The minstrels played their Christmas tune  
To-night beneath my cottage eaves;  
While, smitten by a lofty moon,  
The encircling laurels, thick with leaves;  
Give back a rich and dazzling sheen,  
That overpowered their natural green.

Through hill and valley every breeze  
Had sunk to rest with faded wings;  
Keen was the air, but could not freeze,  
Nor check, the music of the strings;  
So stout and hardy were the band  
That scraped the chords with strenuous hand!

And who but listened? till was paid  
Respect to every inmate's claim;  
The greeting given, the music played,  
In honor of each household name,  
Duly pronounced with lusty call,  
And "Merry Christmas" wished to all!

—Wadsworth.

### Country Girls in the City.

Every autumn hundreds of country girls leave their homes and go to the city to try their fortunes, says a writer of experience. Those with college educations, fitted for teaching or trained for some special line of work may fall into pleasant ways, but the unhappy majority serving in shops and factories, standing behind counters ten hours of the twenty-four, do not have an enjoyable life by any means. Suppose they had remained at home in the quiet village, where they thought there was nothing to do and had taken up dress-making as a trade, worked the garden, raised flowers or studied bee culture, and had gone in the society of the town where each one stands on his own merits and the lines of caste are not so closely drawn as in a city; would they not have been better off after all?

The country may lack the feverish glare and excitement of the city, but its pleasures are more wholesome and of a more enduring kind. The country girl earning her way in a village has more liberty than the saleswoman of the city store earning \$5 a week. The country girl gets her holiday whenever she wants it. She is not obliged to pay \$2 a week for car fare and luncheons or spend all her hours in noisy streets, where the din of passing traffic makes it necessary to shout in order that she may be heard. She does not live in a cheap boarding house, but sits at a generous table spread with a bountiful country fare, and when she passes down the street friends greet her on every side. Yes, the country-bred girl gets a bad bargain when she leaves home for the city.

### Crystallized Mint Leaves.

Crystallized mint leaves are among the latest novelties in confections. The lover of mint, whether in the form of candy, tea or julep, will find them deliciously refreshing. The sprays of fresh leaves are treated apparently in the same way as violets or roses or candied fruits are produced, only the mint leaves retain all the original flavor. One could easily make them at home by boiling a clear, thick syrup of sugar to the point where it crystallizes and dipping the mint sprays into it, or pouring the syrup over the mint sprays laid on a pie plate, then hanging the sprays up by the stems to drain and crystallize.

## DOMESTIC ECONOMY.

### Advice as to Roasting a Turkey.

"Ninety-nine women out of every one hundred, ninety-nine cooks out of every one hundred will bake a turkey with the back to the pan," said a New Orleans man who keeps in touch with the kitchen, "and this is a mistake. I said ninety-nine out of every one hundred. Rather should I have said that the mistake is almost universally made. But few cooks ever think of cooking the turkey the other way. There seems to be a demand for well-browned turkey breast. But in browning the breast they sacrifice the sweetness of this part of the fowl. The best way to prepare a turkey is to bake it with the breast down. I learned this lesson from Mme. Begue, whose place down in the old quarter, near the French market, has become famed all over the country. She never thinks of baking a turkey with the breast up. The breast is turned to the bottom of the pan, and instead of being dry and tasteless when it is served is richly flavored and as sweet and juicy as one would care to have it. You see, all the fine flavor of the turkey, the juice of the dressing and all the daintier touches flow down toward the breast of the fowl, and when the white meat is served you get the full benefit of every flavor added during the process of preparing and baking the turkey, in addition to the distinctive taste of the fowl itself.

"Inconvenient and awkward? Not at all. It is just as easy to cook a turkey in this way as in any other way, and the result is infinitely more satisfactory. It is no trouble to arrange the fowl in the pan; if you desire to place the fowl on the table before carving it you will find that it will look quite as well as it would if baked in the usual way, and certainly it will taste much better than it would if you baked the breast until it was dry and flavorless."—New Orleans Times-Democrat.

### New England Pumpkin Pies.

New England pumpkin pies are quite often made of squash, instead of the genuine Connecticut pumpkin. They are not equal to the pumpkin pie though more elaborate pies. To make squash pies take five pints of stewed and strained squash, two quarts of boiling milk, two even tablespoonfuls of salt, five cups sugar and eight eggs and a nutmeg and a half, grated. Pour the milk, boiling hot, over the squash, which has been pressed through a colander; add the sugar and the nutmeg, and when the mixture is cold, the eggs, well beaten. Old-fashioned housekeepers often add two tablespoonfuls of rosewater and even wine to this pie, although it is not necessary or even suitable for such pies. Line deep pie plates with plain piecrust and fill them with the squash custard. Bake the pies forty minutes in a moderate oven.

Pumpkin pies are made with less eggs and more spice than squash pies. Allow four cups of stewed and strained Connecticut pumpkin to four cups of milk and one teaspoonful of salt. Add four eggs well beaten and half a cup of cream. Add, finally, a cup and a half of sugar and one tablespoonful of ginger, one of mace, powdered, and one grated nutmeg. Cook the pumpkin all day in a little water until it is finally steamed soft. Do not peel it until it is cooked. The peel imparts sweetness and rich color to the pumpkin if it is cooked with it a long time, as it should be. Squash is cooked in abundance of water for about half an hour, or until it is soft. Many housekeepers prefer to use molasses in sweetening a pumpkin pie.

### Hints to Housekeepers.

Broths, purees and other thick soups are highly nourishing; but clear soups, when served as the first course of a dinner, are valuable only because they supply warmth and start the digestive juices into action.

Shetland shawls, if not very dirty,

may be cleaned by rubbing them with magnesia and flour mixed in equal proportions, changing it as it gets dirty. This plan is also excellent for woollen shawls, provided they are not made of very heavy wool.

Never send a jelly that has been to table a second time in the same form. Break it up and serve in jelly glasses, or divide it into rough pieces and heap it up in a dish as rock jelly. The appearance of a dish makes a wonderful difference.

To make old-fashioned boiled apple cider sauce, boil down a quart of new sweet cider to two-thirds of its original quantity. Then peel, quarter and core as many apples as it will cover well and boil slowly until the apples are tender. Remove the apples, put in more and cook in the same way. Turn all together and keep in a stone jar.

Cream sauces should always be made with flour. Cornstarch requires so long a time to become thoroughly cooked that it is not adapted for thickening milk. One reason for this is that milk should never be boiled, because of its astringent effect upon the system. This is indicated by the fact that physicians order boiled milk when they desire to administer an astringent.

Delicious chocolate caramels may be made by boiling together one-half cupful of sugar, one-half cupful of molasses, one-half cupful of milk or cream, one-half cupful of butter and two ounces of grated unsweetened chocolate. Flavor with vanilla. Test by dropping a small portion into ice water. If it cracks when bent, it should be removed from the fire at once. Pour into buttered pans. Before it is cold mark in squares.

### Domestic Hints.

**BOILED EGGS.**—Drop the egg into boiling water by a long-handled spoon, but do not cover the egg with water or it will burst. For soft-boiled eggs cook three minutes; medium, three and one-half minutes; hard, five to ten minutes.

**STUFFED EGGS.**—Cut off the tops of hard-boiled eggs and carefully remove the yolks with the handle of a spoon. Cut off the other end of the egg so that they will stand, then fill with the following mixture: The white meat of cold chicken chopped fine, a small piece of melted butter, a pinch of salt, the yolks of the eggs and one teaspoon of cream for each egg used. If eaten cold, garnish the dish with parsley; if hot, serve with drawn butter sauce.

**SALMON LOAF.**—Melt two tablespoonfuls of butter in a saucepan, add two eggs well beaten, two-thirds of a cup of cracker crumbs, salt and pepper to taste and all from one can of salmon. Remove the bones and skin from the salmon and add to the above mixture. Work until very fine; put in a greased baking powder can, cover and steam one hour. Remove from can while hot and set on ice. Serve sliced on platter, garnished with hard-boiled eggs, parsley and quarters of lemon.

**RICE OMELET SOUFFLE.**—Boil a quarter of a pound of well-washed rice in a pint and a half of milk until stiff. Stir in two ounces of butter, half a pint of cream and four egg yolks beaten light with two ounces of granulated sugar and vanilla to taste, add a quarter of a pound of citron cut fine and two ounces of almonds blanched and pounded fine in a mortar. Stir all well together, adding at the last four whites of eggs beaten very stiff. Put in a pudding dish and bake until firm—about half an hour. Serve immediately in the dish in which it was baked.

**APPLE CUSTARD.**—Pare, core and quarter half a dozen fine, large cooking apples, put them in a double boiler with the grated rind of half a large lemon, cook until tender and press through a sieve; there must be three-quarters of a pint of the puree. Add an ounce and a half of granulated sugar, and set it away to get cold. Then beat three eggs very lightly and stir gradually into a pint of rich milk alternately with the apple puree, add a little cinnamon, pour it into a pudding dish and bake about twenty minutes. Serve cold with a little cinnamon and sugar sifted over it.



### The Water Supply.

Water is the most essential to existence of all that man puts into his stomach—indeed, the only single thing he cannot live without, and yet there is nothing we eat or drink that so frequently carries in itself the germs of disease.

There is a definite group of diseases which, because they are so especially liable to be spread by means of drinking water, are called water-borne diseases. Among these are such scourges as typhoid fever, cholera and dysentery. Mineral poisons are also occasionally dissolved in water, and exert their injurious effects upon those who drink it. It is obviously, therefore, a matter of the highest importance that the drinking water of a household or a city should be in its purity above reproach; but the problem for the ordinary man is how to determine this point.

The appearance of the water is by no means conclusive, for it may be beautifully clear and palatable, yet contain myriads of deadly bacteria, or it may be muddy and of a disagreeable odor and taste, and yet contain nothing of a really harmful nature. The only way by which absolute certainty can be had lies in a chemical and bacteriological analysis, repeated at regular intervals.

But elaborate and repeated analyses of this sort can be had, as a rule, only in the case of large communities with a common source, and are not at the service of the individual who must look to his own supply from wells or springs. In such a case one must judge of the source by its surroundings.

If the neighborhood is thinly settled, and the well is 40 or 50 feet from the nearest house or outbuilding and on higher ground, one may use the water for drinking with a reasonable sense of safety. The same is true of water from a spring which issues from the ground at a level considerably above that of the house and barns. But if water is drawn from wells in a town or from a well near the house or outbuildings, or below their level, or from a spring, similarly situated, it is almost sure to be contaminated occasionally, if not constantly, and so is the water of a stream except in an absolutely unsettled country.

In such cases, if no other supply is available, all the water should be boiled, and, if possible, filtered as well, before being used.—Youth's Companion.

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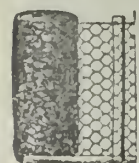
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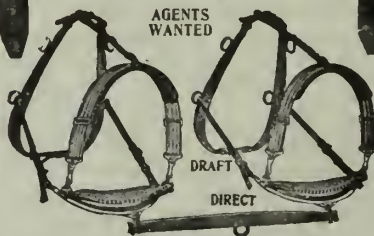


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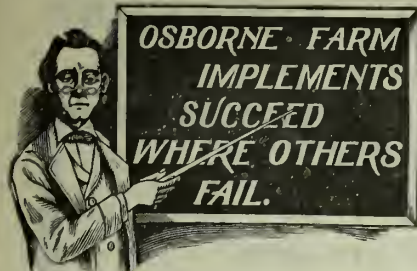
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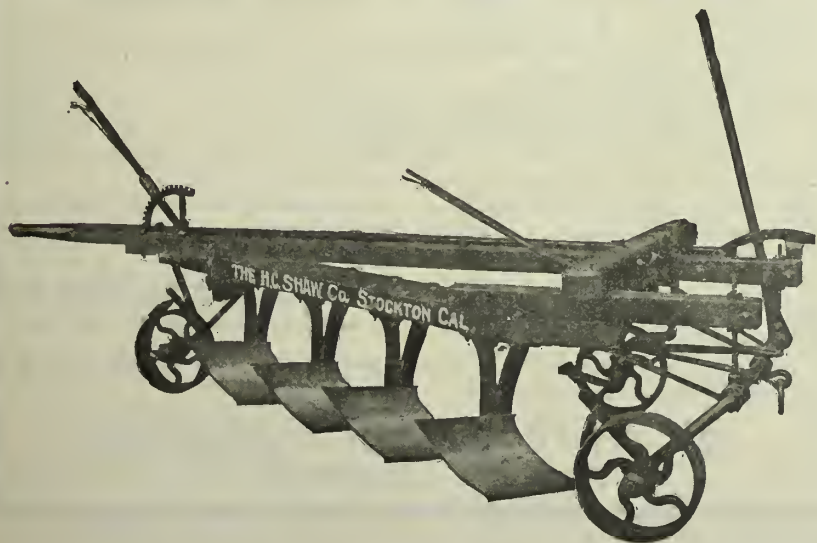
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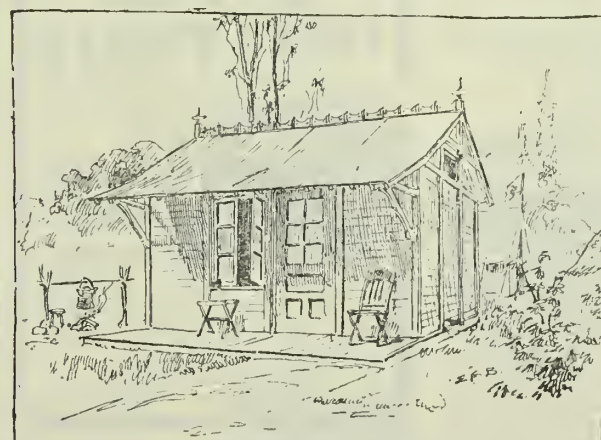
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## FRUIT MARKETING.

### Our Market for Canning Fruits.

TO THE EDITOR:—The market for canning fruit has until recently been very uncertain and the farmer has had the worst of it.

But now the conditions have changed since the canneries have organized a strong combine; they will develop and properly supply a rapidly growing demand.

The first two years of their existence they tried to depress the market for our fruits, to enable them to get as many term contracts as possible at low rates. From now on they cannot expect to get any more term contracts, since they have given us a season of \$40 clings and \$50 to \$75 per ton for blackberries—the latter price was received by me from Code Portwood when our local buyers were turning down \$40 blackberries, claiming they had a surplus that was not salable.

The tendency from now on will be for the combine to get as much as possible out of their term contracts. For instance, when they made their rivals pay big prices, it made every one of their low-price goods worth the advanced price.

Also each year the associations will have a stock of canned goods on hand, and they will not want any little one-horse cannery to start up and depress the value of the goods by buying the fruit for less money.

It will seem to all that the opinion of undersigned has changed, and so it has, and you will see by the foregoing article the methods of the association have changed for the better.

The farmer need not now build co-operative canneries nor need he fear to set out extensively of all kinds of canning fruits, as we have in the field plenty of experienced capital that can market all we can raise and pay us good prices.

I emphasize the words "can" and "good prices." There is a doubt if they will or not. Our part is to begin now and lay our plans and see we get our share of good times that the consumers of canned goods enjoy. How to do it will be discussed at another time.

T. E. BARLOW.

Sebastopol, Dec. 3, 1901.

### Co-operative Marketing of Fresh Fruits.

TO THE EDITOR:—One of the practical results of co-operation was given last week at a special meeting of the Loomis Fruit Growers' Association, which was organized as recently as last April in alliance with similar associations at Newcastle, Penryn, Placerville and Rumsey, the entire business being managed by the California Fresh Fruit Exchange, co-operating with the Southern California Citrus Fruit Exchange. In addition to these associations, considerable fruit was handled from the Sacramento river district, Cutter Bros. also shipping with them. The special business of the meeting was the distribution of a dividend of nearly \$1200 to the members, based on a payment of 2 cents per box on all fruit delivered by the members, and by profits on loading charges, shook, nails and paper. There was a unanimous expression of satisfaction and approval of the new method of managing their own business, and their is no doubt that next season many more of the growers will be found in the ranks of those who have come together for future benefit and united effort.

It was worthy of note that owing to the fact of a large quantity of cling peaches being pooled by these associations a considerable advance was obtained on the prices set by the buyers earlier in the season, amounting in the aggregate to thousands of dollars, another practical proof of the gain in co-operating.

F. J. FITCH.

Loomis.

TEACHER—What led Columbus to conclude that the world was round? Bright Boy—Well, his experience with it proved that it was anything but square.—Albany Telegram.

### Destiny of the Hog Skin.

The oily, greasy, thick pig skin is arousing new interest. Heretofore the slaughterhouse has not seriously bothered itself about skinning the hog while his green hide, left on the carcass and unencumbered with expense, brought 8 cents per pound and more as pork, or 12 cents per pound when weighed in as cured ham or smoked bacon.

The scientist will not let things alone, however, and it may yet pay to strip the hide from the hog for commercial purposes. The leather splitter has demonstrated his ability to shave hides almost into tissue leather. With this implement at his command and a new process in his possession, an American inventor claims that he can split a pig skin to the fineness of a cologne bottle stopper cover and manufacture that article at a ridiculously low price. He can make the finest of "imported" kid glove stock, can displace oiled paper with a better and a cheaper article and do the same with the fine texture of rubbered goods now used for waist shields. A hog hide can be treated so finely and split into so many separate skins as to astound the uninitiated. With this prospect before it, the hog skin has a right to come off and to expect much in the near future.—National Provisioner.

## Tuttle's Elixir



Cures all species of lameness, curbs, splints, contracted cord, thrush, etc. in horses. Equally good for internal use in colic, distemper, founder, pneumonia, etc. Satisfaction guaranteed or money refunded. Used and endorsed by Adams Express Company.

TUTTLE'S FAMILY ELIXIR Cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience" FREE. Tuttle's Elixir Co., 82 Beverly St., Boston, Mass. 487 O'Farrell St., San Francisco, Cal. Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief if any.

## IT TAKES FIRST PRIZES

at fairs and expositions, but more than that, it takes first place in the hearts of its users. The



the most practical hand seeder made. Sows from 6 to 8 acres per hour. All grains and grasses. Saves  $\frac{1}{2}$  the seed. You can't afford to buy any other. Examine it at your dealers. Send for circulars.

GOODELL COMPANY, 38 Main St., Antrim, N. H.

## TO Farmers

AND

## Storekeepers

WRITE TO

Pacific Oil and Lead Works,

155 TOWNSEND STREET, SAN FRANCISCO,

For Booklet on Cultivation of

FLAX SEED.

You will find it of interest to you.

Postal card will do.



## FLEMING'S LUMP JAW CURE

Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the absolute cure of Lump Jaw, free if you ask for Pamphlet No. 211. Fleming Bros., chemists, Union Stock Yards, Chicago, Ill. Trade Mark.

## KENDALL'S

Used it 20 Years.  
Goff, Kane, Feb. 7th, 1900.  
Dr. B. J. Kendall Co., Gentlemen:—I have used your Kendall's Spavin Cure ever since I can remember, about 20 years, and it is all you recommend for it.  
Yours, WM. D. CALDER.

## SPAVIN CURE

**THE OLD RELIABLE**

And Most Successful Remedy Ever Discovered for Spavins, Ringbones, Splints and all Lameness.

This is the unqualified experience of thousands of horsemen and others in this and other countries and there is no reason why you should not share in these benefits. Just read what the above people say about "Kendall's." Write to them for your own satisfaction.

In addition to being the best stable remedy known, it is unequalled as a liniment for household and family use. Sold generally by all druggists. Price \$1; six bottles for \$5. We send valuable book, "A Treatise on the Horse," profusely illustrated, free upon request.

DR. B. J. KENDALL CO.,  
Enosburg Falls, Vt.

# BLACK LEG VACCINE.

Do Not Delay Vaccinating--Your herd IS LIABLE to attack NOW and if you delay vaccinating until after Black Leg has broken out you are almost sure of a 5% loss, and as even a 1% loss will cost more than vaccinating, it pays to vaccinate before trouble begins.

Our Vaccines are tested on control animals before placing on the market and they are subject to exchange for fresh vaccine if not used within six months from date of manufacture. They have been successfully used for three years in the worst infected districts of California.

Our prices are lower than others', and the growth of our business in the last three and a half years attests that our products and liberal methods are meeting with the approval of stockmen.

Our friends are among those who have hitherto used foreign and other vaccines.

Testimonials.—To prospective customers, who desire references, we shall be pleased to furnish them. WE CAN ALSO REFER TO STOCKMEN WHO HAVE REVACCINATED WITH OUR VACCINE AFTER UNSATISFACTORY TRIAL OF FOREIGN AND OTHER VACCINES.

### PRICES OF BLACK LEG VACCINE:

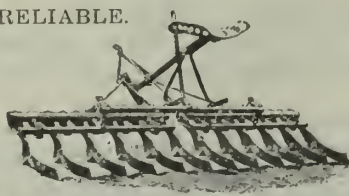
SINGLE, per package, containing ten or more doses, according to age of animals.....	\$1 25
DOUBLE, per double package, containing ten to twenty doses, according to age of animals.....	1 75
STRINGS, per package of 10 doses, including needle.....	1 25
Per package of 15 doses, including needle.....	1 75
Per package of 25 doses, including needle.....	2 50
Per package of 50 doses, including needle.....	4 75
VACCINATING OUTFIT, complete for using single and double vaccine.....	4 00
BLACK LEG SYRINGE, with two needles and extra washers, all in metal case	3 00
TERMS.—Cash with orders or we will send by express, C. O. D. We prepay all charges. Special discount to users of 500 or more doses.	

Write us for booklet on **BLACK LEG** and **ANTHRAX**. They are readable and interesting even if you apprehend no trouble from these diseases.

For references to successful users and for further particulars concerning these and our other products, Address

**THE CUTTER ANALYTIC LABORATORY,**  
FRESNO, CALIFORNIA.

RELIABLE.



## ACME Pulverizing Harrows.

NEW STYLES. ALL SIZES.

Coast Agents: BAKER & HAMILTON,

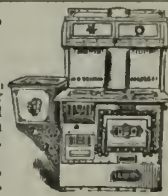
San Francisco, Sacramento, Los Angeles, Portland, Or.

WRITE FOR CATALOGUE AND PRICES.

## \$50.00 RANGE FOR \$25.00

TO INTRODUCE THE

**WILLARD STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/2 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Dept. 8. Will ship C. O. D. with privilege of examination.



DEWEY, STRONG & CO., Patent Solicitors, 330 Market St., San Francisco, Ca'.



## Breeders' Directory.

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**FOR SALE.**—Jersey bull, 3 yrs. old; bull calf, 3 mos. old—both solid color. Also Jersey cows. Sulphur Spring Farm, Niles, Cal.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**JERSEYS, HOLSTEINS & DURHAMS.** Bred specially for use in Dairy. Thoroughbred Hogs, Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**PETER Saxe & Son,** Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**J. H. GLIDE,** Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A.J.C.C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

### POULTRY.

**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**"SNOW WHITE" GOBBLEERS** for sale by C. A. Stowe, 330 N. Grant St., Stockton, Cal.

**WILLIAM NILES & CO.,** Los Angeles, Cal. Nearly all varieties chickens, geese, ducks, peafowl, etc.

**SANTA TERESA POULTRY FARM,** Eden Vale, Santa Clara Co., Cal. Illustrated catalogue with show record for 1900, free. Agents Eclipse Aluminum Leg Bands; sample 2 cts.

**FOR BREEDING** Hare and Poultry in small lots, address Cottonwood Farm, Pleasant Grove, Cal.

**MEAT MEAL.** Best quality. Lowest price. A. Warren Robinson, Napa, Cal.

**BRONZE TURKEYS.** Ed. Hart, Clements, Cal.

### SWINE.

**THOROUGHbred BERKSHIRES.** I have some fine boars and gilts of August farrow. Prices reasonable. Dr. R. Cauch, Carpinteria, Cal.

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**BERKSHIRE, POLAND-CHINA & DUROC HOGS.** Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**FOR SALE.**—Our entire herd of Poland-Chinas. 20-acre farm; paying business. S. P. Lindgren & Sons, Kingsburg, Fresno Co., Cal.

**W. R. McCASLIN,** Cosumnes, Sacramento Co., Cal. All breeder of Poland-China Hogs.

**P. H. MURPHY,** Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**CHAS. ASHLEY,** Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

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**POULTRY** supplies of all kinds. Send for my new price list and booklet, "HOW TO FEED FOWLS FOR PROFIT." CROLEY, 508 Sacramento St., San Francisco, Cal.

### FANCY POULTRY.

We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Publishers of the Pacific Coast Poultryers' Hand-Book and Guide. Price 40c, postpaid.

**PACIFIC INCUBATOR CO.,**  
1317 Castro Street, Oakland, Cal.

## French Draught Stallions FOR SALE.

**HUGO.** REGISTERED NO. 9438. Weight 1800; bred by J. D. Patterson, Oxnard, Cal.; foaled April 18, 1898. Sire, Leopold 4250 by imp. Louis 3299; dam, Henrietta II 5779 by imp. Montebelle 3298; second dam, imp. Lady Henrietta I 2419.

**MARQUIS.** REGISTERED NO. 9017. Weight 1750; bred by J. D. Patterson, Oxnard, Cal.; foaled March 25, 1895. Sire, imp. Montebelle 3298 by Caesar; dam, imp. Maria I 2450 by Hercules.

These Stallions are first-class and their sires and dams are among the noted prize winners in Europe. For price and further particulars address AMERICAN BEET SUGAR CO., 123 California Street, San Francisco.

### PIGS FOR SALE.

**Nine Four-Month Registered Berkshire Pigs.**  
\$10 EACH, OR \$75 FOR THE NINE.  
E. S. GORDON, Box 13, SANTA ROSA, CAL.

## "BLACKLEGINE"

### Pasteur Blackleg Vaccine Quite Ready for Use.

This is in the form of a cord impregnated with the vaccine. Each dose is separate and applied with a special needle. The dose is hitched on to a notch in the needle and then inserted under the skin at the shoulder. The needle is provided with a detachable handle. Vaccination with "Blacklegine" is as rapid and easy as taking a stitch. There is no dissolving, or mixing, or filtering a powder; no injecting or trouble in measuring doses; no expensive syringe outfit.



BLACKLEGINE OUTFIT, SHOWING NEEDLE INSERTED IN HANDLE AND DOSE OF VACCINE ATTACHED READY FOR VACCINATING.

Prices: "Single Blacklegine" (for common stock): No. 1 (ten doses), \$1.50; No. 2 (twenty doses), \$2.50; No. 3 (fifty doses), \$6.00. "Double Blacklegine" (for choice stock) (first lymph and second lymph, applied at an interval of eight days), \$2.00 per packet of ten double doses. Blacklegine Outfit (handle and two needles), 50 cents.

**PASTEUR VACCINE COMPANY,**  
Chicago, New York, Omaha, Kansas City, Ft. Worth, San Francisco.

## DIRECTIONS FOR SUCCESSFUL OLIVE PICKLING



**P**LACE olives in solution composed, 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove bitterness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gal. water, for two days. Put in brine of 8 oz. salt to gallon water for 7 days. Put in brine 10 oz. salt to gallon water for 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles scalded in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

## YOU MUST USE RED-SEAL-LYE

## EMERY'S BEEF, BLOOD & BONE FOR POULTRY.

Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are big. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

**N. OHLANDT & CO., INDIANA AND YOLO STS., SAN FRANCISCO, CAL.**

## HOLSTEIN CATTLE.

**SLEEPY HOLLOW RANCH, SAN ANSELMO, MARIN CO., CAL.**

**ALL THE LEADING FAMILIES OF THE BREED.**

Every Sire directly imported from Herds of the Greatest Eastern Breeders.

Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams. Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.



## STATE FAIR VISITORS

knew good pigs when they saw them and our sales were much larger than in any other year, which has reduced our stock to a small number.

We have a few pigs ready to ship and other litters coming on.

We won a large number of premiums which show the character of the herd. We still claim to have the best large herd on the coast and are adding new animals when we find good ones.

Persons wanting good pigs should get in their order early to get a choice of litters.

Correspondence solicited.

**SESSIONS & CO., 117 E. 23rd St., LOS ANGELES, CAL.**

## HUMBOLDT STOCK FARM,

**JOSEPH MARZEN, PROPRIETOR.**

**Breeder of SHORTHORN AND HEREFORD CATTLE.**  
Young Stock for Sale. **LOVELOCK, NEVADA.**

## FERTILIZERS!

**NITRATE OF SODA** supplying Nitrogen or Ammonia,  
**THOMAS' PHOSPHATE POWDER** supplying Phosphoric Acid,  
**MURIATE and SULPHATE OF POTASH** supplying Potash,  
THE THREE ESSENTIAL ELEMENTS OF PLANT FOOD.

Can be supplied alone or mixed in any proportion to supply whatever deficiency may exist in the soil, thus paying only for what is lacking and necessary to replace.

**BALFOUR, GUTHRIE & CO.,** 318 CALIFORNIA ST., SAN FRANCISCO.  
ALSO AT FRESNO AND LOS ANGELES.  
WRITE TO THEM FOR PAMPHLETS.

## PATENTS

Our U. S. and Foreign Patent Agency presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, our Washington branch which tends exclusively to our business before the Patent Office, intimate acquaintance with the subjects of inventions in our own community, and our most extensive reference library, containing official American reports since 1790, with full copies of U. S. Patents since 1872. All worthy inventions patented through DEWEY, STRONG & Co.'s Patent Agency will have the benefit of a description in the *Mining and Scientific Press*. We transact every branch of patent business, and obtain patents in all countries which grant protection to inventors. The large majority of U. S. and foreign patents issued to inventors on the Pacific Coast have been obtained through our agency. We are conservative and counsel preliminary examinations in cases of doubtful novelty. Guide to inventors sent on request.

## DEWEY, STRONG & CO.

(ESTABLISHED 1860.)

**PATENT AGENTS,**  
330 Market St., San Francisco, Cal.

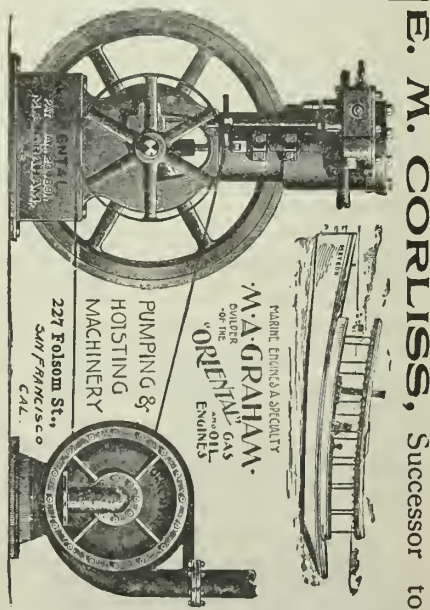
—AND—  
918 F St., Washington, D. C.

## The Fresno Scraper.

3 1/2-4-5 Foot.



**FRESNO AGRICULTURAL WORKS.**  
FRESNO, CALIFORNIA.



**E. M. CORLISS, Successor to**



## MONARCH

**Grubber and Stump Puller.**

**HOOVER & CO.,**

16 and 18 Drumm Street, San Francisco.

## Prune Dip.

"Greenbank" Pure 100% Caustic Potash and 98% Powd. Caustic Soda.

**T. W. JACKSON & CO.,**  
Sole Agents, - No. 123 California Street, SAN FRANCISCO, CAL.

Coughs & Colds **R. Hall's Pulmonary Balsam.**  
Cured with



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Dec. 18, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec.	May.
Wednesday.....	77 3/4 @ 76	82 3/4 @ 79 3/4
Thursday.....	76 @ 75 3/4	80 3/4 @ 79 3/4
Friday.....	75 1/4 @ 76 1/4	79 @ 80 1/4
Saturday.....	76 3/4 @ 75 3/4	80 3/4 @ 79 3/4
Monday.....	76 @ 75 1/4	80 3/4 @ 79 3/4
Tuesday.....	75 3/4 @ 75 3/4	79 @ 80 3/4

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	May.	July.
Wednesday.....	46 3/4 @ 44 3/4	49 3/4 @ 43 3/4
Thursday.....	45 3/4 @ 44 3/4	48 3/4 @ 43 3/4
Friday.....	45 @ 45 3/4	48 3/4 @ 40 3/4
Saturday.....	46 3/4 @ 45 3/4	49 3/4 @ 39 3/4
Monday.....	45 3/4 @ 44 3/4	48 3/4 @ 39 3/4
Tuesday.....	44 3/4 @ 45 3/4	38 3/4 @ 39 3/4

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	— @ —	1 06 3/4 @ 1 06 3/4
Friday.....	1 03 @ —	1 06 3/4 @ 1 07 3/4
Saturday.....	1 03 3/4 @ —	1 06 3/4 @ 1 07 3/4
Monday.....	— @ —	1 06 3/4 @ 1 05 3/4
Tuesday.....	— @ —	1 06 3/4 @ 1 06 3/4
Wednesday.....	— @ —	1 06 3/4 @ 1 06 3/4

## WHEAT.

Market has not shown quite so much firmness as during preceding week, but to purchase freely buyers would find it necessary to pay very close if not fully up to the very best prices of the past fortnight. Shippers have lately effected some heavy purchases in the interior, giving them a fair supply for the time being, but it is believed they are still short of the requirements for the fleet now in port and engaged for grain loading. There are thirty ships at present on the engaged list, with a carrying capacity of 80,000 tons. While a few of these ships may take some barley and general cargo, it will be the exception where they will not be wholly loaded with wheat. The harbor is about bare of disengaged tonnage, however, and it is not likely there will be any special accumulation of idle ships for several months to come. In practically cornering the ship supply, exporters have advanced ocean freight rates, the last spot charter reported being at £1 16s 3d, being about \$1 per ton over the lowest figure for the season. This stiffness in freights naturally operates against wheat, although there are not a few optimists who believe wheat will, inside of a few months, command materially better prices than have been yet established this season. There is certainly room for improvement. The United States visible supply of wheat east of the Rockies was 59,356,000 bushels, against 55,240,000 a week ago and 61,082,000 a year ago.

California Milling.....	1 05 @ 1 10
Cal. No. 1 shipping, alongside.....	1 02 3/4 @ 1 03 3/4
Oregon Valley.....	1 02 3/4 @ 1 05
Washington Blue Stem.....	1 02 3/4 @ 1 07 3/4
Washington Club.....	1 00 @ 1 03 3/4
Off qualities wheat.....	95 @ 1 00

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	6s 2d @ 6s 2 1/4d	6s 3 1/4d @ 6s 4d
Freight rates.....	38 3/4 @ —s	35 @ 36 1/4s
Local market.....	98 3/4 @ 1 01 1/4	1 02 1/4 @ 1 05

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.03 3/4 @ 1.03.
May, 1902, delivery, \$1.07 3/4 @ 1.05 1/2.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at — @ —; May, 1902, \$1.06 3/4 @ 1.06.

## FLOUR.

While the market has inclined against buyers, official quotations have not shown material change. There was no undue selling pressure, and buyers as a rule found it necessary to pay full current figures, not being able to obtain such concessions as had been recently readily granted them. To this extent the market shows improvement, and may soon rule still firmer.

Superfine, lower grades.....	\$2 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50
Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

The advanced figures last quoted for feed descriptions have been since quite

well maintained, although the demand could not be said to be brisk at full figures demanded. Prices readily obtainable for export grades and brewing barley were without special improvement on figures current for these descriptions for some time past, but free purchases were not possible at the prices named by shippers. Chevalier is now nearly out of stock and is hardly quotable in a regular way. Shipments of barley by sea since last review include two cargoes—110,691 centals—for United Kingdom and 12,000 centals by steamer for New York.

Feed, No. 1 to choice.....	78 3/4 @ 80
Feed, fair to good.....	76 3/4 @ 77 3/4
Brewing, No. 1 to choice.....	80 @ 87 3/4
Chevalier, No. 1 to choice.....	92 3/4 @ 1 00
Chevalier, poor to fair.....	77 3/4 @ 85

## OATS.

Market is showing firmness, with prospects of continuing favorable to the selling interest throughout the season. Heavy demands on Government account have had much to do with sustaining values. Red oats are receiving marked attention, and this variety is being freely seeded for the coming season. In many respects the Reds show superiority over most other kinds.

White Oats, fancy feed.....	1 30 @ 1 35
White, good to choice.....	1 25 @ 1 30
White, poor to fair.....	1 15 @ 1 20 3/4
Gray, common to choice.....	1 20 @ 1 30
Milling.....	1 22 3/4 @ 1 32 3/4
Surprise, good to choice.....	1 30 @ 1 35
Black Russian.....	1 05 @ 1 27 1/2
Red.....	1 12 1/2 @ 1 35

## CORN.

Choice to select is scarce and salable to advantage. Poor qualities are being offered rather freely and are not receiving much attention. Some Eastern corn was landed here last week, despite the stiff prices current on the same, owing to scarcity of choice domestic.

Large White, good to choice.....	1 40 @ 1 50
Large Yellow.....	1 25 @ 1 35
Small Yellow.....	1 45 @ 1 55

## RYE.

A full cargo of this cereal—45,807 centals, valued at \$36,072—was sent aloft the past week for Belgium, being the first noteworthy shipment for a long time. A steamer took this week 1300 centals for New York. There is not much selling pressure at present, and market is rather firm at the quotations.

Good to choice, new.....	75 @ 80
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## BUCKWHEAT.

Not much in stock, neither are there great quantities offering to arrive. The demand, however, is limited.

Good to choice.....	1 60 @ 1 65
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## BEANS.

The market is not showing much activity, and is not noteworthy for strength, but holders are not in the majority of instances disposed to crowd offerings on buyers, and values are in consequence being tolerably well maintained at figures close to the range last quoted. Outside prices below stated are possible only on most select qualities, and then cannot always be calculated on if stock is pushed to immediate sale. There is a moderate movement outward, both by sea and rail. Present offerings include very few Black-eyes, Reds or Pea beans, and not many Small Whites.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	2 85 @ 3 15
Lady Washington.....	2 75 @ 3 00
Pinks.....	1 80 @ 2 00
Bayos, good to choice.....	2 35 @ 2 50
Reds.....	2 50 @ 2 75
Red Kidney.....	3 25 @ 3 50
Limas, good to choice.....	4 40 @ 4 60
Black-eye Beans.....	3 40 @ 3 65
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

Market is well stocked with Green Peas, and values for this variety are not being very well sustained. Spot supplies of Niles Peas are of light volume and in few hands, causing market to rule firm.

Green Peas, California.....	1 50 @ 2 00
Niles Peas.....	1 75 @ —

## WOOL.

December is seldom other than a dull period in the wool trade, and the current month is not proving an exception in this regard. The market is of necessity quiet at this time, as there are practically no desirable wools now offering, and unplaced stocks of heavy and defective wools are not sufficient to admit of much activity. Values are necessarily largely nominal and without quotable change.

## SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Humboldt and Mendocino.....	11 @ 12
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Northern Mountain, free.....	9 @ 10
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 3/4 @ 8 3/4
San Joaquin Lambs.....	7 3/4 @ 9

## HOPS.

There are not many hops now offering in this center from first hands, but the market does not give evidence of being any more favorable to sellers than for some weeks past. In a wholesale way, it is difficult to effect transfers at an advance on 11c, and to command the figure on round lots the quality must be first-class. A New York authority, speaking under recent date of the Eastern market, says: More than one-half the week's receipts were in transit for export, a very considerable part of which were from the Pacific Coast and included some large consignments from Oregon. The condition of our local market has not changed, except that there is a more general willingness on the part of holders to sell goods according to actual values. This has necessitated a widening of the range of quotations, without, however, any reduction in the finer grades. No sales have been reported to us this week above 15c, and that for only very choice quality; the bulk of the business is at 12@14c, with some common lots down to 10@11c. The demand has not shown much if any improvement, taking the market as a whole, but some receivers have been able to move more stock of one kind or another. The trade is especially dull in the inferior qualities and in old hops, the value of which is entirely nominal. Moderate business has been reported in the interior of this State, with a wide range in values, owing to very wide range in qualities—say from 9c to 15c—but fewer transactions at the top figure this week, as the choicest lots are getting pretty well picked up.

Good to choice, 1901 crop.....	10 @ 12 1/2
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## HAY AND STRAW.

Arrivals of hay have been lately rather heavy, as compared with immediate requirements, and market for most kinds has in consequence inclined in favor of the buying interest, although no marked changes were developed in quotations. Alfalfa proved an exception, not being in excessive supply and selling to very good advantage. Straw did not arrive in heavy quantity and commanded steady figures.

Wheat, good to choice.....	9 00 @ 12 00
Wheat and Oat.....	8 50 @ 11 00
Oat.....	6 50 @ 9 50
Barley and Oat.....	6 00 @ 8 00
Barley.....	6 00 @ 7 50
Volunteer.....	5 50 @ 7 00
Alfalfa.....	8 50 @ 10 00
Clover.....	6 00 @ 7 50
Stock.....	5 50 @ 6 50
Compressed.....	9 00 @ 12 00
Straw, 3/4 bale.....	35 @ 47 1/2

## MILLSTUFFS.

Market for Bran and all mill offal is lacking in firmness, dealers operating slowly at current figures, but offerings are not particularly heavy and prices are slow dropping to materially lower levels. Rolled Barley has ruled steady at last quoted advance. Milled Corn is without quotable change.

Bran, 3/4 ton.....	15 00 @ 16 00
Middlings.....	17 00 @ 19 00
Shorts, Oregon.....	15 50 @ 16 50
Barley, Rolled.....	17 50 @ 18 00
Cornmeal.....	31 00 @ 32 00
Cracked Corn.....	30 00 @ 31 00

## SEEDS.

Stocks of Mustard Seed are being steadily reduced through outward movement and local consumption, and are now of rather small proportions, with market tolerably firm at figures quoted. A shipment of 3032 sacks went forward this week per steamer for New York. Business in other seeds quoted herewith is light, but at generally unchanged values.

	Per cwt.
Flax.....	2 50 @ 2 75
Mustard, Yellow.....	3 25 @ 3 50
Mustard, Trieste.....	3 00 @ 3 15
	Per lb.
Canary.....	3 3/4 @ 3 3/4
Rape.....	1 1/4 @ 2 3/4
Hemp.....	3 3/4 @ 3 3/4

## HONEY.

The steamer American, sailing from this port on the 14th inst. for New York, carried as part cargo 726 cases honey, including 200 cases taken on at Seattle. Spot stocks are not heavy. Values are steady. The extreme southern part of the State has long been noted for its fine honey, but there is some Extracted now on market from Monterey county which will compare favorably with the choicest honey ever produced in this or any other portion of the globe.

Extracted, White Liquid.....	5 3/4 @ 6
Extracted, Light Amber.....	4 3/4 @ 5
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	11 @ 12 1/2
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7

## LIVE STOCK AND MEATS.

A further advance in the improved figures last quoted for Beef has been established, with market firm at the quotations. Veal is in light receipt and when of desirable sizes sells to advantage. Values for good to choice Mutton are higher and are being well maintained at the quoted range. Hogs in light receipt and higher. Small hogs are in fair request to be cut up as fresh pork, and are selling to relatively better advantage than the larger ones.

Beef, first quality, dressed, net 3/4 lb.....	7 3/4 @ 8
Beef, second quality.....	7 1/4 @ —
Beef, third quality.....	6 3/4 @ 7
Mutton—ewes, 7@7 1/2 c; wethers.....	7 3/4 @ 8
Hogs, hard grain fed, 150 to 250 lbs.....	5 3/4 @ —
Hogs, small, fat.....	5 1/2 @ —
Hogs, large, hard, over 250 lbs.....	5 1/2 @ —
Hogs, country dressed.....	6 3/4 @ 7
Veal, small, 3/4 lb.....	8 @ 9 1/4
Veal, large, 3/4 lb.....	8 @ 8 3/4
Lamb, spring, 3/4 lb.....	9 @ 9 1/4

## POULTRY.

There was a fairly active demand for choice Young Chickens, such stock meeting in the main with a tolerably firm market. Prices for Old Chickens averaged rather low, owing to offerings of Eastern. Ducks and Geese sold at better figures than last quoted, but only fine young stock was especially sought after. Pigeon market was firm for young and fairly steady for old at the figures current. Turkeys have been inclining in favor of buyers. Eight carloads of Eastern dressed are reported for next week, and with the arrivals expected from the interior of this State and Oregon, the indications are that everybody will have opportunity to have a fill of Christmas Turkey.

Turkeys, dressed, choice.....	14 @ 16
Turkeys, alive, Hens, 3/4 lb.....	13 @ 15
Turkeys, alive, Gobbles, 3/4 lb.....	12 @ 14
Hens, California, 3/4 dozen.....	4 00 @ 5 00
Roosters, old.....	4 00 @ 4 50
Roosters, young (full-grown).....	4 50 @ 5 50
Fryers.....	4 50 @ 5 00
Broilers, large.....	4 00 @ 4 50
Broilers, small.....	3 50 @ 4 00
Ducks, old, 3/4 dozen.....	4 00 @ 4 50
Ducks, young, 3/4 dozen.....	5 00 @ 6 50
Geese, 3/4 pair.....	1 75 @ 2 00
Goslings, 3/4 pair.....	2 00 @ 2 25
Pigeons, old, 3/4 dozen.....	1 25 @ —
Pigeons, young.....	1 75 @ 2 00

## BUTTER.

Owing to cold weather decreasing the production temporarily, the market is showing more firmness for choice to select fresh, the firmness being accentuated by the demand on holiday account. The more common grades of fresh are going at much the same easy figures current for several weeks past. Cold storage butter is still in fair supply and is being urged to sale, holders being desirous of effecting a clean-up.

Creamery, extras, 3/4 lb.....	24 @ —
Creamery, firsts.....	20 @ —
Creamery, seconds.....	18 @ —
Dairy, select.....	20 @ —
Dairy, firsts.....	17 @ —
Dairy, seconds.....	16 @ —
Mixed store.....	13 @ 14
Creamery in tubs.....	19 @ 21
Pickled Roll, 3/4 lb.....	10 @ 20
Firkin, California, choice to select.....	17 @ 19
Firkin, common to fair.....	16 @ 17

## CHEESE.

The market is well stocked with domestic, other than mild new of high grade, and only for the latter kind is the situation favorable to the selling interest. Eastern cheese is in fair supply, but offerings do not include much which can be termed strictly choice.

California, fancy flat, new.....	12 @ 12 1/4
California, good to choice.....	10 @ 11
California, fair to good.....	— @ —
California, "Young Americas".....	12 @ 13

## EGGS.

Values have ruled more steady than during previous week, especially for choice to select fresh, the receipts showing some decrease on account of cold weather, and the demand being very fair. The market for cold storage stock, however, was without improvement, the supplies of held eggs being large for this advanced date, with prospects for a speedy and profitable clean-up not very encouraging.

California, select, large, white and fresh.....	32 3/4 @ —
California, select, irregular color & size.....	27 3/4 @ 30
California, good to choice store.....	25 @ 27 1/4
California, common to fair store.....	— @ —
Eastern, good to choice.....	— @ —
Cold Storage.....	18 @ 21

## VEGETABLES.

Onion market was somewhat unsettled, owing to some heavy deliveries on contracts which were not expected. That values for choice Onions will drop materially, or that the market will develop any particular weakness, is not prebable. Fresh vegetables, such as Green Peas, String and Wax Beans, were in light receipt and brought tolerably stiff figures. Choice Tomatoes were scarce. Mushroom sales at a wide range of prices,



owing to great difference in quality of offerings.

Beans, String, # lb.....	8 @ 10
Beans, Wax, # lb.....	8 @ 10
Cabbage, choice garden, # 100 lbs...	50 @ —
Cauliflower, # dozen.....	40 @ 50
Cucumbers, Bay, # large box.....	40 @ 75
Egg Plant, # box.....	40 @ 60
Garlic, # lb.....	2 @ 2½
Mushrooms, # lb.....	10 @ 17½
Onions, Yellow Danver, # cental.....	1 50 @ 2 00
Peas, Sweet garden, # lb.....	5 @ 7
Peppers, Green Chile, # sack.....	35 @ 60
Peppers, Bell, # box.....	50 @ 70
Squash, Marrowfat, # ton.....	8 00 @ 10 00
Summer Squash, Bay, # large box.....	1 25 @ 1 50
Tomatoes, # large box.....	50 @ 1 25

POTATOES.

This market is very quiet, the movement outward continuing slow, and were it not for the support of speculative buyers, current values could not be maintained. As to the future of the market, there is naturally a great difference of opinion, some looking for higher prices and others anticipating easier figures. That values in the near future will fluctuate to any great extent either up or down is not probable. Sweets were in moderate receipt and were held at about same figures as last quoted.

Burbanks, Salinas, # 100 lbs.....	1 30 @ 1 60
River Burbanks in sacks, # cental.....	90 @ 1 10
Petaluma and Tomales Burbanks.....	1 10 @ 1 30
Oregon Burbanks.....	1 25 @ 1 50
River Reds.....	1 30 @ 1 50
Sweets, Merced, # cental.....	75 @ 1 00

The Fruit Market.

FRESH FRUITS.

The Apple market is lightly stocked with choice to select, and for this kind is quite firm, particularly so for 4-tier Red of high grade, such as fancy Spitzenberg. Lower grades of Apples are in fair supply and are going at comparatively reasonable figures, with demand for them not particularly active. Pears are not being offered freely and stocks include few of superior quality. For fine Winter Nelis good prices are readily obtainable. Persimmons and Pomegranates are practically out. The market was virtually bare most of the week of Strawberries, Blackberries and Raspberries.

Apples, fancy, # 4-tier box.....	1 50 @ 2 00
Apples, good to choice, # 50-lb. box.....	1 00 @ 1 50
Apples, common to fair, # 50-lb. box.....	40 @ 75
Apples, Lady, # box.....	1 25 @ 1 75
Pears, Winter Nelis, # 40-lb. box.....	1 50 @ 2 50
Pears, other kinds, # box.....	50 @ 1 25
Persimmons, # box.....	30 @ 60

DRIED FRUITS.

Aside from the movement in prunes, there is not much doing in the dried fruit market, especially in a wholesale way. Trade in apricots, apples, pears and peaches is of light volume and is confined mainly to transfers from jobbers, there being very little fruit offering from first hands of the kinds above named. Quotable values for the descriptions in question are without particular change, and on buying orders full current figures would have to be paid, especially for good to choice qualities, but to realize the same full figures on selling pressure would be an exceedingly difficult if not impossible matter. Much of the fruit for which custom is now being eagerly sought is more or less off in quality, and for this sort it is difficult to secure custom, with bids at such a wide range that values are hard to quote on other than holders' views or on prices fixed by jobbers in the filling of orders for ordinary qualities. The prune market is now moderately firm on the 3@3½c basis for the four sizes, latter figure being for new Santa Claras in less than carload lots. The outward movement in prunes continues brisk, and prospects appear good for a clean-up of this fruit the current season. Included in the week's shipments of prunes were 17,141 sacks, or over 1,600,000 lbs., per steamer American for New York.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	7 @ 7½
Apricots, Royal, choice, in sacks, # lb.....	8 @ 8½
Apricots, Moorpark.....	10 @ 12
Apples, in 50-lb boxes, rings, pressed, fancy.....	7½ @ 7½
Apples, 50-lb boxes, rings, pressed, good to choice.....	5½ @ 6½
Figs, pressed.....	— @ —
Nectarines, # lb.....	5 @ 5½
Peaches, unpeeled, fancy.....	6½ @ 7
Peaches, unpeeled, choice.....	5½ @ 6
Peaches, peeled, in boxes.....	12 @ 14
Pears, bales, choice to fancy.....	6 @ 8½
Plums, Red and Black, pitted.....	5 @ 6
Plums, White and Yellow.....	5 @ 6
Prunes, 4 sizes, in bags, 3@3½c; 50-80s, 4¼@4½c; 60-70s, 3¾@4c; 70-80s, 3¾@3½c; 80-90s, 2¾@3c; 120s and less, 2@2½c; these figures for 1901 crop.	

COMMON SUN-DRIED.

Apricots.....	6 @ 6½
Apples, sliced.....	3 @ 5
Apples, quartered.....	3½ @ 4½
Figs, Black.....	— @ —
Figs, White.....	— @ —
Peaches, unpeeled.....	4½ @ 5½
Pears, prime bales.....	4 @ —
Plums, unpitted, # lb.....	1½ @ 2½

RAISINS.

Stocks now remaining are light and are almost wholly in the control of a few packers, who have advanced prices materially. Seeded raisins, which were recently quoted at 5½c and 5¼c for two and three-crown respectively are now held at 6½c and 7c. The cheapest loose Muscatels, two-crowns, are at present quoted at 4¼c, while same raisins a fortnight ago were obtainable at 4c and under. It is estimated that the entire supply of raisins now in the State will not exceed 700 cars.

Following are the prices for new crop, as fixed by the Fresno Association:

Loose Muscatels—	Per lb.
4-crown.....	5½
3-crown.....	5¼
2-crown.....	4¾
Seedless Muscatels.....	5
Seedless Sultanas.....	6
Thompson's Seedless.....	6½
Seeded—	
3-crown, 1-lb. carton.....	7
2-crown, 1-lb. carton.....	6¾
London Layers, 20-lb. boxes—	
2-crown.....	1 25
3-crown.....	1 35

CITRUS FRUITS.

Orange market lacks firmness, too much cold weather and too much green fruit. At the auction sales commenced this week Washington Navels graded as fancy sold as low as \$1.10, few going above \$1.70 per box. Common Navels sold down to 65c and common Seedlings down to 40c per box at auction. Lemons were offered at fully as low figures as have been current for some time past and moved slowly. Limes were as cheap as previously quoted.

Oranges—Navels, # box.....	1 00 @ 2 00
Seedlings, # box.....	65 @ 1 00
Tangerines, # ¼ box.....	75 @ 1 00
Lemons—California, select, # box.....	2 25 @ 2 50
California, good to choice.....	1 50 @ 2 00
California, common to fair.....	75 @ 1 25
Grape Fruit, # box.....	1 50 @ 2 50
Limes—Mexican, # box.....	4 00 @ —

NUTS.

With the holiday demand practically over, the market for both Almonds and Walnuts is inclining against sellers. Very good Walnuts are to be had at 8½c. I X L Almonds are offering at 9c, and Langue-does at 8c. Peanut offerings are not heavy and values are fairly steady.

California Almonds, shelled.....	15 @ 18
California Almonds, paper shell, # lb.....	10½ @ 12
California Almonds, soft shell.....	7 @ 9
California Almonds, hard shell.....	5 @ 6
Cal. White Walnuts, No. 1 soft shell.....	8¼ @ 9¼
Cal. White Walnuts, No. 2 soft shell.....	6¼ @ 7¼
Cal. White Walnuts, No. 1 hard shell.....	8 @ 9
Cal. White Walnuts, No. 2 hard shell.....	6 @ 7
Cal. Chestnuts.....	8 @ 10
Peanuts, California, fair to prime.....	4½ @ 5½
Peanuts, Eastern, hand-picked.....	5½ @ 6
Pine Nuts.....	5 @ 6

WINE.

There is some business doing in new, a transfer of 50,000 gallons dry wines of this year's product being reported at 21c., to be delivered at Cordelia station, Solano county. The above lot is principally claret, with a little white wine. Although prices have not yet been clearly established, it is believed the quotable range of values for dry wines of this year's vintage will be 20@25c. per gallon. There is some select for which certainly not less than the latter figure above quoted will prove acceptable.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, ¼ sacks.....	152,472	3 087,639
Wheat, centals.....	354,311	3,858,562
Barley, centals.....	97,690	4,037,744
Oats, centals.....	28,075	591,124
Rye, centals.....	2,240	40,773
Corn, centals.....	46,457	101,045
Beans, sacks.....	9,832	515,440
Potatoes, sacks.....	34,537	738,838
Onions, sacks.....	3,842	136,614
Hay, tons.....	3,157	77,120
Wool, bales.....	711	40,635
Hops, bales.....	570	6,010

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, ¼ sacks.....	118,596	2,294,662
Wheat, centals.....	320,290	3,431,952
Barley, centals.....	66,891	3,140,155
Oats, centals.....	8	1,393,776
Corn, centals.....	1	46,767
Beans, sacks.....	226	8,374
Hay, bales.....	263	17,078
Wool, pounds.....	11,405	5,327
Hops, pounds.....	11,405	7,917
Honey, cases.....	66,104	70,321
Potatoes, pack's.....	45	232,621
	3,380	370,870
		404,481
		4,908
		1,627
		23,151
		51,075

Seed Time and Harvest.

A good time to think most seriously of the harvest is seed time. The decision you make then will determine the value of your crops later. The growing competition in seed selling is an increasing temptation to unscrupulous dealers to make extravagant claims for their seeds, both in price and producing qualities. The wisest farmers are those who are influenced most by what experience has proven to be good and true. Thousands of

seed sowers in all sections of the country sow Ferry's famous seeds year after year, and have the satisfaction of good harvests to justify their continued faith in the Ferry firm. They pay a few cents more at seed time, but realize many dollars in better crops at the harvest. The natural consequence of this confidence is an ever increasing business. D. M. Ferry & Co. sent out last year more seeds than any other seed house in the world. The 1902 catalogue of this house is now ready and will be found a useful guide in selecting the choicest seeds for the farmer, the truck gardener and the flower gardener. It is sent on request. Address D. M. Ferry & Co., Detroit, Mich.

New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING NOVEMBER 19, 1901.

687,175.—LOCK—H. Barry, S. F.
686,922.—HAT SHOWCASE—R. W. Brown, Colfax, Cal.
687,127.—BRACKETT—J. E. Chapman, San Jose, Cal.
686,806.—EXPLOSIVE ENGINE—H. Enge, West Berkeley, Cal.
687,025.—BORING MACHINE—B. E. Hervey, Ritzville, Wash.
686,851.—WEIGHING APPARATUS—G. Hoepner, S. F.
686,853.—BUCKET—E. Hulson, Oregon City, Or.
686,976.—AIR VALVE—Kelly & Hazard, Los Angeles, Cal.
687,159.—BOTTLE—D. Landau, S. F.
687,052.—WINDOW FASTENER—J. J. McCormick, S. F.
686,863.—OILER—J. D. McFarland, Jr., S. F.
686,957.—SYRINGE—J. M. Miller, Dayton, Wash.
686,825.—VEHICLE TIRE—W. Morck, Oakland, Cal.
686,951.—WELL HAULER—W. Plotts, Whittier, Cal.
686,784.—TOOTH BRUSH—C. W. Richards, S. F.
687,069.—SEAL LOCK—H. A. Rotermund, Montague, Cal.
687,100.—RAILWAY—J. N. Young, Alameda, Cal.

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Some manufacturers endeavor to imitate P & B building paper by making their building paper look like P & B building paper, both before and after wrapping. They have gone so far as to label their packages like P & B packages.

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Live and Dressed Turkeys Wanted.

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In 10 to 15 miles highly improved and other horses  
y & Son — ON —

FRIDAY,  
DEC. 20, 1901,  
I WILL SELL BY AUCTION THE FOLLOWING

Standard - Bred Mares,  
In Foal to McKinney 2:11¼  
and Iran Alto 2:12¼.

Ydrel (dam of Thos. R. 2:15, Linda Oak 2:28¼, the latter dam of Dr. Frasse 2:12¼, Frasse's Sister 2:25¼ and Vendome 2:11¼) by Nutwood 2:18.  
Ydrel is in foal to Iran Alto 2:12¼.  
Nettie Nutwood (dam of Hillsda 2:15) by Nutwood. In foal to Iran Alto.  
Twenty-third by Director 2:17 out of Nettie Nutwood. In foal to McKinney 2:11¼.  
Myrtle Dale by Iran Alto 2:12¼ out of Nettie Nutwood. In foal to McKinney.  
Progressive by Iran Alto out of Bonnie Piedmont by Piedmont. In foal to McKinney.  
Sister to Fredericksburg 2:12 In foal to Iran Alto.  
Elsie Downes by Bood e 2:12 out of Linda Oak. In foal to Iran Alto. Dr. Frasse's sister.  
Driving horses, well-bred colts and fillies by Iran Alto, Boodle, Antinous, etc.  
These are all from the Vendome Stock Farm and are to be sold without reserve, as Mr. James Rea intends to devote the larger portion of his farm to pasturing dairy cattle.  
Sale will take place at Occidental Horse Exchange, 721 Howard St., near Third, S. F.

WM. G. LAYNG, Auctioneer.  
Catalogues ready Dec. 16. Horses at yard Dec. 18

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—DEALERS IN—  
BEANS, POTATOES, GRAIN, DRIED FRUITS, DECIDUOUS AND CITRUS FRUITS.  
Car Lots a Specialty. Send Samples.  
224 CLAY STREET, SAN FRANCISCO.



# WE LEAVE IT TO THE READER TO SAY "WHO JUGGLES,"

AND

## Who "Bobs up with one lie after another."

It is characteristic with that class of people to lose their tempers and call names because they have no good arguments and must depend on BLUFFING.

Our "would-be competitors" are squirming terribly because the United States beat the DeLaval in the Model Dairy at the Pan-American, and are resorting to all sorts of SCHEMES to break the force of the victory of the United States over the DeLaval Separator.

They say we put out "what purports to be a skim milk record of the work done by the 'U. S.' machines in the Model Dairy." We gave the exact statement signed by the Superintendent of the Model Dairy, namely: Average test of the U. S.—.0138.

They published a statement also signed by the Superintendent of the Model Dairy showing average of .0161. The Superintendent afterwards found he had made an error, and stated over his own signature the correct average for the DeLaval was .0172; but these "would-be competitors" do not correct the error, they continue to advertise the figures which now to be wrong.

The DeLaval Co. publishes the second period of running, which was the best season of the year, from 9th to September 28th inclusive. We published our second period from September 29th to October 30th inclusive. All experienced dairymen know that the U. S. had the hardest milk to separate, as the cows were longer in milk, giving less quantity, and cold weather coming on; yet, with all these conditions against the U. S., it excelled the DeLaval, as the Superintendent's reports show. (It also beat the DeLaval in the first period, after adjustment.)

The DeLaval statement reads "Tests were from August 9th to September 28th," but the record books of the Model Dairy show no record was made until the 11th of August. This gives them two days to adjust the machine under the friendly expert operators before any tests were recorded.

Our statement includes the first run of our machine with no time allowed for adjustment.

The records after adjustment of the first period show that the United States beat the DeLaval on these runs also.

The DeLaval Co., being aware they were beaten in the first period, sent their machine back to the factory to be fixed over and improved, if possible, for a second trial. Their machine was one made specially for that work. The U. S. was taken from regular stock and was returned to its booth after the first run and remained there until we were requested by telegraph from the Superintendent of the Model Dairy to put in the U. S. to make a second run. We wondered why the necessity for telegraphing such a request, but telegraphed back we would comply with the request. We learned later that the DeLaval was shaking so badly that it was not deemed safe to run it longer, therefore the necessity for arranging by telegraph to replace it with the U. S.

The DeLaval Separator is a top-heavy machine filled with 40 to 50 metal discs, and when they get out of balance, cause trouble if continued in use. Therefore the necessity for immediate change when it begins to shake. They claim to run on slow speed, but always, when in competition with the U. S., attempt to run at very high speed—sometimes more than 50 per cent higher than they advertise to run. They know that their separator cannot run at high speed long, so run it at high speed only in tests with the U. S.

The U. S. is made more substantially, and does stand high speed, and runs longer and easier at its speed than the DeLaval does at its claimed lower speed.

The DeLaval Co. advertise a "voluntary" (?) statement purporting to be from the engineer of the Model Dairy in which he says "it took but one-fourth as much steam to do our work with it (DeLaval) as the 'United States' used." Such a statement is so ridiculous on its face that no experienced dairyman would doubt that it was voluntary on the part of the DeLaval Co.

We have hundreds of statements from dairymen, who have used both separators, that the U. S. runs easier than the DeLaval, and wears much better.

The truth is that Engineer Downy was never present when the U. S. was running, with one or two exceptions, when

his department was unable to get sufficient steam to run so much as a Babcock Testor until very late in the forenoon. The work in the Model Dairy was done before he got around in the morning.

Now read what Mr. Van Alstyne, Superintendent of the Model Dairy, over his own signature, says in reference to power in September when the DeLaval was running:

"We found the power insufficient, and were obliged to put a cut-off in the pipe leading upstairs to prevent the herdsmen drawing on our steam at times when we needed it for the dairy work, and as the weather became colder the latter part of September this trouble increased to such an extent that one day, with both burners lighted, we found our steam entirely out, so that we intended making a change before your machine was put in, and we were delayed a week in order to get the consent of the proper authorities. We then used soft coal, which did not give satisfaction, because it filled up the flues of the boiler, and we changed to cake, which has been eminently satisfactory."

Remember this was when the DeLaval Separator was running and before the U. S. was put in. They could not get steam enough to run the DeLaval.

This "voluntary" (?) statement says further "that the 'U. S.' had an expert to run it." He was in no sense an expert, had never worked in a creamery or dairy or attended a Dairy School or Experiment Station. The DeLaval did have experts to run theirs. Both operators were graduates and rank partisans of the DeLaval, and were angry because we objected to having unfair and prejudiced operators run the U. S.

The DeLaval Co. advertise that our Gold Medal was awarded on "combined exhibit of separators, Babcock Testers, Davis Swing Churns, and other apparatus." The official record reads: "Gold Medal on U. S. Separator, Babcock Tester, Davis Swing Churn." It does not read on "combined exhibit" and does not use the word "exhibit" in any way. The reader will notice the DeLaval Co. adds the words "combined exhibit" and "and other apparatus," of course, to mislead in their endeavor to break the force of their defeat.

We had in our booth nine separators, two Babcock testers, and a model of the Davis Swing Churn, but no full-sized churn. Our booth was 15 feet long by 10 feet deep.

We applied for larger space, but were informed that the building was limited in size and we must be content with what was assigned us. We had the smallest space of any exhibitor of separators. The DeLaval Co.'s booth was 35 feet long by 10 feet deep and contained sixteen separators; therefore, if our Gold Medal was on the exhibit, it is equally true the DeLaval's was on their exhibit, and as our exhibit was less than half as large as theirs, will the intelligent reader believe the DeLaval statements that with less than half the space and about half the amount of goods, our award was on display?

The work in the Model Dairy was not finished until long after the Gold Medals were awarded by the judges. If the awards had been given on the result of the work in the Model Dairy, the United States would have had the only Gold Medal, and the DeLaval an award of second merit only, a Silver Medal, as it came out second on the work there.

The DeLaval Co. advertise "that more fat was lost in churning (by the U. S.) than saved in separating." The records show that

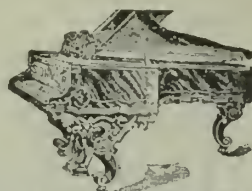
Average test of the buttermilk from the United States was... .109  
Average test of the buttermilk from the DeLaval was... .121

The DeLaval was badly beaten again in this line. The U. S. proved to be superior in every way.

The reader must not forget that the DeLaval Co. have been advertising for over a year that the DeLaval Separator was awarded a Grand Prize at Paris, but now admit in their advertisements that this award was to the "Societe Anonyme Separator," which company exhibited at Paris a butter extractor called a radiator, and did not exhibit a cream separator.

For proof of our statements we refer to the official records.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.



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Then get an instrument that will give the recipient satisfaction. A piano you can depend upon. Don't take chances, come here, where you're safe, where you can get a piano you know is a good one.

Everything is marked in plain figures. We are open evenings and we believe we can save you money.

Sohmer Piano, artists favorite	\$600 to \$1,000
Byron Mauzy Piano, home manufacture	450 to 600
Lester Piano, grand tone	400 to 500
Hamilton Piano, mandolin attachment	350
Spielman Piano, very substantial	300
A New Piano, special	175

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One Sohmer	400
Two Byron Mauzy	350
One Byron Mauzy	300
Two Hamilton	250
On Arion	175
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One Weber	125
One Chickering	100
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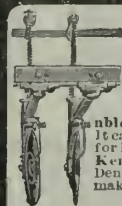
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## Patrons of Husbandry.

Tulare Grange.

To THE EDITOR:—Tulare Grange met in its hall on 11 A. M. on Saturday the 7th and celebrated the birthday of the Order of Patrons of Husbandry by an excellent dinner and a good attendance.

One candidate for the degrees was elected, and two applications for membership were received and referred to committees.

This being the day for electing officers the following were elected, nearly all being re-elected: F. H. Styles, W. M.; Morpheus Jacob, Overseer; John Tuohy, Lecturer; E. C. Shoemaker, Steward; Bro. Holcomb, Assistant Steward; Sister Fleming, Chaplain; Julius Forrer, Treasurer; Sister Bertha I. Morris, Secretary; Sister Burleigh, Pomona; Sister Jones, Flora; Sister Kembel, Ceres; Sister Slaughter, Lady Assistant Steward; Sister Field, Organist.

An extract from the report of the Secretary of the National Grange was read, giving the financial condition of the Order and the membership; 193 new Granges have been organized during the year ending 30th of September, the largest number being organized in Michigan. In California only four new Granges were organized. It should have been forty.

Owing to the time taken in electing officers the December question of the National Grange, "What influence is exerted by the rightly conducted farm home upon the character and success in life of boys and girls raised in those homes?" was laid over, as was also the programme subject, "The value of farm accounts." J. T.

FIRST ROOSTER—Young Cluckatuck is a lively young rooster." Second Rooster—Yes, he is a chip of the old incubator"—Brooklyn Eagle.

## ONCE IN A LIFE TIME



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lasts that long under ordinary conditions. First the life of a wagon depends upon the wheels. This one is equipped with our Electric Steel Wheels, with straight or stagger spokes and wide tires. Wheels any height from 21 to 60 in. It lasts because tires can't get loose, no setting, hubs can't crack or spokes become loose, fellos can't rot, swell or dry out. Angle steel hounds. THOUSANDS NOW IN DAILY USE. Don't buy a wagon until you get our free book. "Farm Savings." ELECTRIC WHEEL CO., Box 10 Quincy, Ill.



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DEALERS IN PAPER,

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BLAKE, MOFFITT & TOWNE, Los Angeles.  
BLAKE McFALL & CO., Portland, Or.

## Birds as Weed Destroyers.

We have ever looked upon the economic value of our native song birds as resting on their services in the destruction of troublesome insects, but in the Year Book of Agriculture for the year 1898, Prof. Sylvester D. Judd, assistant in biological survey for the Agricultural Department, points out the services of some species in destroying innumerable seeds of some of our most common weeds.

Some of the weeds from which these birds like to pick the seeds, and which indeed form a large part of their subsistence in winter and fall, are ragweed, smartweed, bindweed, pigweed, lamb's quarters, amaranth, dandelion, purslane, knotweed and chickweed. Then there are the coarser grasses, as the sedges, crab grass, nut grass, pigeon grass and others that often crowd out better grasses in fields and the lawns.

While it may be said that good farming would mean the destruction of these weeds, most of which are annuals, in our cultivated fields, so that they should not ripen their seed, yet few can even do this, while the roadsides, edges of woodland, hedge rows and pastures will produce many to perpetuate the pests. And what a power of perpetuation they have. Some of the above species are said to produce a hundred thousand seeds to a single plant, while most of them exceed five or ten thousand.

The birds most actively engaged in this work are the sparrows and finches, which include more than twenty species, horned larks, meadow larks, blackbirds, cowbirds, quail, grouse, grosbeaks and others. Their capacity for this work is illustrated by a few examples.

A crow blackbird will eat from thirty to fifty seeds of smartweed or bindweed at a single meal, and a field sparrow 100 seeds of crabgrass, and they take several meals a day. In the stomach of a Nuttall's sparrow were found 300 seeds of amaranth, and in another 300 seeds of lamb's quarters; a tree sparrow had eaten 700 seeds of pigeon grass, and a snowflake in Shrewsbury, Mass, picked up 1000 seeds of pigweed for its breakfast.

Goldfinches have been noticed busily feeding upon the seeds of the Scotch thistle, the bull thistle, wild sunflowers, cone flowers, wild lettuce, prickly lettuce, catnip and mullion, and when killed their stomachs were found filled with these seeds. Remember that at least three-fourths of the year weed seeds are the principal food of most of these varieties. Very few of them eat much grain, even where it is grown largely. Of nineteen native birds, including four varieties of sparrows killed in a wheat field a few miles south of Washington, only two had eaten

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The Pacific School of Correspondence,  
328 Montgomery St., San Francisco, Cal.

grain, and they but a single kernel each, while five English sparrows were literally gorged with wheat.

The introduction of the English sparrow by its driving away these little native birds has been responsible for more damage by insect and weed pests than all other causes combined, including cats and boys with guns.



## PAGE

## IF IT'S MADE

in a better way, and of better material, as it really is, then you can see how it has become so popular. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.



So nicely woven of strong steel wire that the tension is the same all over. Stretch it tight. Contraction amply provided for. Low in price; high in quality. Sold everywhere. If your dealer hasn't it, write to American Steel & Wire Co., Chicago, New York, San Francisco, Denver.

## A MAN SAVED

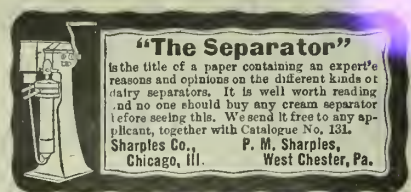
BY USING A FOLDING SAWING MACHINE. One man can saw more wood with it than two in any other way and do it easier. 9 CORDS IN 10 HOURS. Saws any wood on any ground. Saw trees down. Catalog free. First order secures agency. Folding Sawing Mach. Co., 55 N. Jefferson St., Chicago, Ill.

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up a little money? Would you like to go into a profitable business? Then buy one of our Star Drilling Machines and put it to work. You can make more money drilling wells of all kinds than you can make with the same amount of money invested in any other business. Write us at once for free catalog and proofs of these statements. STAR DRILLING MACHINE CO., Akron, O.

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The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

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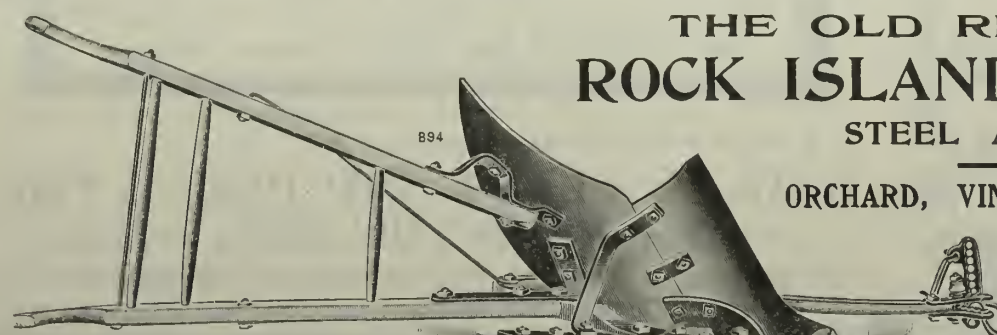
Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

\$7000 WILL BUY 1747 acres substantially improved; farming implements included. An exceptional opportunity for grain and stock raising. For full particulars address H. H. MINER, Le Grano, California.

CONTRA COSTA COUNTY LAND FOR SALE. Send for list. D. J. WEST, Martinez, Cal.

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GRAPE VINES.

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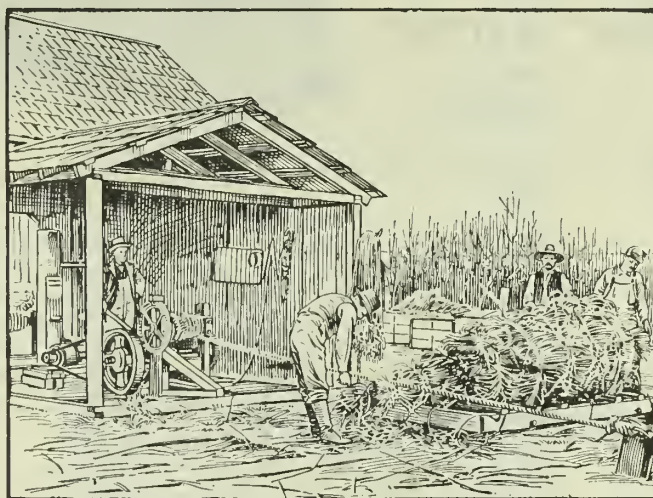
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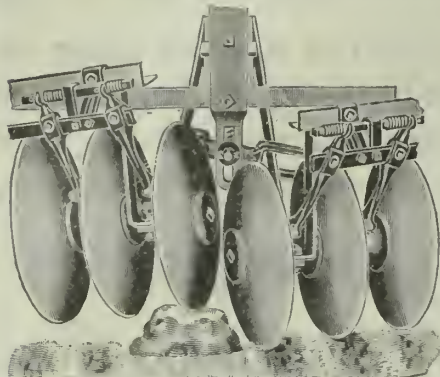
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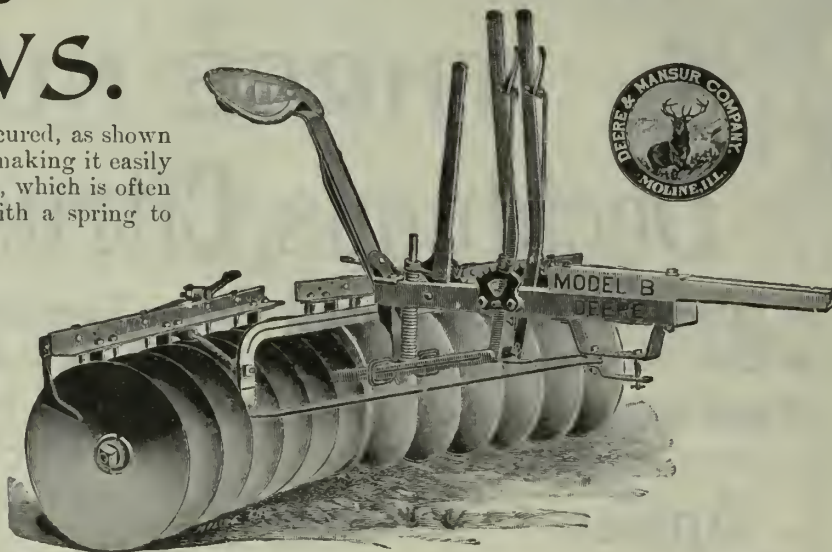


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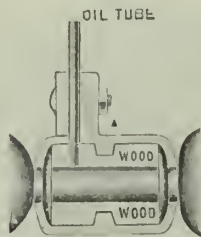
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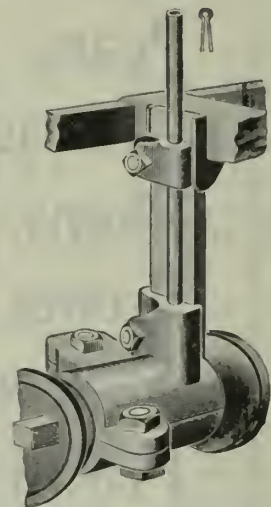
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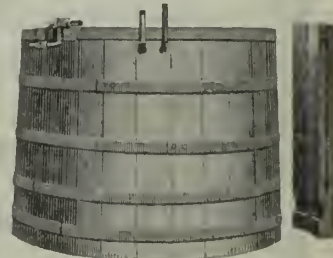
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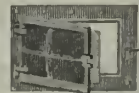
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LXII. No. 26.

SAN FRANCISCO. SATURDAY. DECEMBER 28, 1901.

THIRTIETH YEAR.  
Office, 330 Market St.

### The American Ostrich Feather.

Written for the PACIFIC RURAL PRESS by E. H. RYDALL.

In consequence of the diligence and enterprise of the California ostrich farmer a new article is being disseminated all over the United States and finding its way into the homes of the American people. It is none other than a genuine American ostrich feather. It will require a great many ostriches and a great many years to present each of the eighty million people of this country with an American ostrich feather; and yet perhaps not so many years as may at first sight appear. Ostrich farms are in full operation in California, Arizona, Texas and Florida. The feathers annually furnished by a full grown adult ostrich amount in value to about \$30. At least 1000 ostriches are now at work producing beautiful black and white feathers for the adornment of the ladies of this great republic. They are engaged, also, in the business of producing more ostriches, so that it is very likely the lady who lives to-day will live when the millinery market of the United States, which pays for \$2,000,000 worth of ostrich feathers every year, will purchase solely the feather of the American ostrich. Stranger things have happened. The present prejudice in favor of imported articles can easily be overcome by a few words of explanation to the intelligent regarding the feather of our native son—the American ostrich.

While the present American demand is supplied by the Cape ostrich farmer in Africa, as is nearly the entire civilized world, it is a well known fact that the finest ostrich feathers come from southern Egypt—the land of the Pharaohs; the next in quality from eastern Arabia. The oases south of Tripoli, the vast solitudes of the Soudanland in the desert of Sahara in North Africa, furnish the next in point of superiority, beauty and size; and last come the regular trade ostrich feathers of the Cape, sold to and used by prince and peasant, the patrician and the plebeian, and so improved by the arts of the feather dressers that it is almost impossible to distinguish the ordinary feather of the Cape from that which comes from Egypt and the other distant eastern lands where dwells the wild ostrich. It is entirely owing to British enterprise that the people of England, America or any other nation can purchase the ostrich feather so universally used. It is within the memory of the present generation that ostrich feathers were a rare product from a rara avis, the possession of which was enjoyed exclusively by the patrician and the parvenu, and entirely beyond the means of eighty per cent of the peoples of civilized countries. Owing to the experiments of a few French officers in Algiers, in the

north of Africa, it was found that the wild and fleeting ostrich, who disappeared perpetually over the horizon in the African deserts, could be domesticated and reduced to the ordinary status of a barnyard fowl. England took up the experiments with her unlimited capital, and the result of her enterprise was the establishment of the largest ostrich

feather market in the world; this is located at London, England, and here the feather merchants of the world pay \$8,000,000 every year for ostrich feathers, most of which money, it may safely be said, passes into the pockets of the ostrich farmers at the Cape.

After the feather is plucked from the bird, be it in



Artesian Well of Alkali Water.

Egypt, from the carcass of the dead wild ostrich shot by the hunter on the desert, on the veldt in South Africa, or among the endless mesas in California, a number of processes have to be gone through before it is fit for the use of the millinery or the dry-goods market. The different grades of feathers are at first sorted; long ones come from the wings, both

experience. Then they have to be curled and joined to other feathers, the inferior being placed beneath. The feather of fashion consists of several ordinary ostrich feathers. Girls sew these skilfully together, then the feathers are steamed and afterwards taken to the curler; he gives the limp feather a beautiful curl, taking care that every fiber is in its right place; finally the buncher takes charge of the feathers and arrange them in sizes for sale—tips, plums and so forth, when they are ready for the warehouse, from which they go to the milliners all over the land.

The result of all the industry and skill required in the preparation of an ostrich feather for the market is to add as much value to it as the original cost of the crude feather. In California every eight months the ostriches are assembled in their corrals and a skillful feather cutter appears to take off the beautiful plumage which, unless thus attended to, would in the course of nature of itself fall to the ground and be injured. He pulls out the short feathers of the body and tail, but the long beautiful white and black feathers of the wings he cuts off with shears; in about three weeks after this operation the feather stems fall out and other beautiful feathers begin to grow. It is always the object of the cutter to avoid injuring the bird, for a feather root injured may result in a wound which will prevent another feather growing in the same place. The birds are hooded before the operation begins; else it would not be possible to hold them still. It is usual in California to advertise a clipping and draw the crowds; indeed it is the exhibition of these strange creatures as sights to the tourists at the present time that affords a marvelously increased revenue to the ostrich farmer. This will in time cease, for the ostriches will be familiar to all, but on will go the march of improvement and the product of the Cape ostrich, now so much used by the American people, will be supplanted by the American ostrich feather, fresh, and full of life, so to speak, from the American ostrich.

Verily, it would seem to the mind of the reflecting observer or the intelligent reader, that the feather fresh and vigorous from the living American ostrich were better to wear and, would enjoy a longer life of usefulness than that pressed in the holds of vessels for weeks in transportation from the Cape to the immense London warehouses, where they linger until the various great auction sales of ostrich feathers take place.

### An Alkali Well in the Desert.

The small picture on this page shows that every desert well does not make an oasis. The settler's intention apparently was to make a pond or reservoir which should be bordered with perennial vegetation and prove a delight in an arid land. He seems to



Taking Feathers from a Full-Grown Male Ostrich.

white and black, while short ones come from the tail and body of the ostrich. The first process is to tie a number to a string, scour them, clean them with soap suds and then pass them on to the dyer. The dyer of ostrich feathers has to be an experienced artist; no amateur can successfully dye ostrich feathers, as many a lady has found to her cost by

have succeeded in making a pond of such bad water that, not only could nothing grow upon it, but the evaporation covered the surrounding land with the hateful white crust of the alkali. This alkali danger is widely present in the arid regions and is receiving the closest attention of both scientific and practical men to reduce it to a minimum.



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TWO DOLLARS PER YEAR IN ADVANCE.

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DEWEY PUBLISHING CO. Publishers

E. J. WICKSON. Horticultural Editor

San Francisco, December 28, 1901.

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## The Week.

Holiday weather of exceptional brightness continues and for lack of rain many people are having ample leisure for the pleasures of the season. Unfortunately, however, apprehensions of shortage of moisture enter into holiday greetings and lower their key a little in many parts of the State. All should remember that such apprehensions avail for nought. They are robbers of comfort even if never realized, and they are a doubling of the woe due to realization. It is a case of worst coming to worst, which every spirit should summon courage to vanquish. California courage has triumphed over many real hardships, it should certainly help all to overcome the fear of hardship which will probably not appear. Let not the holiday season be one of idle foreboding; let it be rather a time of cheer and of expectation of good to come.

This issue closes Volume LXII of the PACIFIC RURAL PRESS. It has been a half year of much activity in rural affairs and our columns mirror the satisfactory condition. The index which appears upon the last page this week will be of constant service to those who keep the volumes for reference and thus possess always the fullest possible encyclopedia of California rural industries. The index is also of significance to the casual reader, for it shows how intimately we enter into details of the best practice and the most closely related science. As we look over this index ourselves it seems as though we had never had more interesting and important subjects to urge upon the attention of our readers, and our advertisers seem to be in a similar state of mind. Every column of the paper should be read. Agriculture is nothing unless commercially successful, and none can succeed in these rushing times without the advantage of the up-to-date materials, agencies and methods, which it is the function of our advertising pages to bring within the reach of all. Therefore we say: Study the index of the closing volume, study the advertising pages, for in both these are full signs of breadth and of a progressive spirit.

Though the Exchanges have adjourned over Christmas, they closed on Monday with a lively state of things. Wheat was the strongest it has been for a week and accomplished an advance on both spot and futures. The advance seems reasonable every way, but it is vigorously opposed by the local push, which is bullying freights and bearing wheat with all its might. The charter ring are still piling up tonnage, all the ships coming this week going on the engaged

list. There has been quite a movement outward—five cargoes of straight wheat and two more mixed wheat and barley—over 16,000 tons of wheat valued at over \$333,000. Barley is firm at about the same prices as last week. Oats are the same; quite free arrivals, but mostly bought to arrive. Corn is firm; yellow being less in supply and having a preference. Buckwheat is a little higher—in fact the whole cereal line is that way. Beans are unchanged. Bran is stiffer. Hay the same as before. Meats are firmer; beef and mutton not changing, but hogs are higher, owing to lighter arrivals and sharpened demand. Fine butter is firm—in fact the whole line is improved a little. Cheese is unchanged. Eggs are in good demand and choice fresh is little better. Turkeys have flown upward. All expected an oversupply and the reverse happened, so that high prices for California have ruled. Too many were frightened out of shipping apparently. Other poultry is easier. Potatoes and onions are unchanged; they are steadily held, but there is light movement. Fancy oranges and lemons for the holiday trade have done well; others are as cheap as ever. Pomeloes have sold better. In dried fruit there has been a large traffic in prunes, and the end of the last two crops is said to be in sight. Other dried fruits are in better condition of firmness and strength. Nut prices are the same as last week. Hop buyers are operating at low prices. Wool is unchanged.

Readers of the daily papers are treated to a strangeglomeration of facts and fancies in a report of a meeting of French vineyardists, which comes by cable. These vineyardists are said to be in a desperate state of mind because they have planted California vines which have borne so much more heavily than their own old vines that there is overproduction of wine, and they propose to pull up the vines and plant corn. If wireless telegraphy can do better than the cable in mixing up things, it should be set at work at once. The facts are, of course, that the French vineyards have been saved by planting American vines as root-stocks; that the French wine product has increased, and that the California product is now coming forward to reduce the market for French wines—therefore, etc. But we do not advise our French friends to grow corn, although Johnny Cake is now one of the most popular Americans in Europe. The corn States of the Mississippi valley can beat the whole of Europe in growing maize just as surely as corn juice can beat all the wines when it comes to the harder drinking which too much of the world is now learning to do. If the French could only hold their own people to drinking light wines instead of cheap alcoholic mixtures from German distilleries, their vines could not be too productive.

In view of the present promise in the fig on the caprification basis, it is very timely that the Division of Pomology of the U. S. Department of Agriculture has undertaken a publication in pamphlet form on the fig—its history, culture and curing. The writer is fortunately Dr. Gustav Eisen of California, whose interesting essay on the capri fig we published last week and whose leadership in fig literature is well known. The publication will be limited in number so that a general gratuitous distribution can not be undertaken, but a few copies will be sold at cost by the Superintendent of Documents, Union Building, Washington, D. C. We make very prominent notice of this because we are very desirous that all California fig growers should have the pamphlet for reference. We shall have our own contribution to this very much alive subject by publishing next week some interesting observations in Smyrna by Mr. George C. Roeding of Fresno.

Placer county is not the only county which has supervisors who need roasting for not providing protection for fruit crops in the manner prescribed by law. It is stated that this important fruit county provides for no county horticultural commissioner. Although the losses sustained by the horticulturists of Placer county alone amounted to the sum of \$200,000 in the season of 1900, no help was given nor action taken by the Board to give relief or assist in checking these destructive and increasing enemies of the orchardist, and, further, that no moneys had been appropriated for this purpose. At the same time that \$2000 was appropriated to grade and ornament

the Courthouse grounds, there was no fund available for the protection of the fruit-bearing orchards in the county, the taxing of which pays for the grading and beautifying the Courthouse grounds, as well as the salaries of the county officers. The reason why the County Supervisors are so thoughtless of their duty in this respect is that no farmer or horticulturist holds office on this Board or is among the salaried officers of the county. We do not believe in urging men for or against office because of their occupation, but certainly the Placer County Supervisors must awaken to the needs of the horticulture of the county just as the Supervisors in some other counties must also do.

## QUERIES AND REPLIES.

### Grapes for the Colorado Desert.

TO THE EDITOR:—I should like your advice as to what varieties of table grapes would be best adapted to the Colorado desert. I want to grow about 40 acres of the best early varieties and desire advice as to what kind and what proportion of each to plant.—COLONIST, San Diego county.

The experience of grape growers at Palm Springs, which is on the edge of the Colorado desert, is that the grapes most successful there are the Sweetwater, or Chasselas Fontainebleau, the Chasselas Rose and Thompson Seedless for very early white grapes. The Malaga is successful as a later white grape. The Rose of Peru and Black Hamburg are good as dark colored varieties, ripening later. The Muscat does not seem to be well adapted to the conditions. The proportion of these to be planted is pretty difficult to determine. It seems to us, however, that we would plant at least three quarters of the acres of the two Chasselas varieties and the Thompson Seedless, with say five acres of black varieties and five acres of Malaga. This you know is merely a matter of opinion and subject to error. The large acreage of early white grapes is based upon a good shipping demand for table grapes in advance of the same varieties grown elsewhere and this seems to be reasonable to expect. Thompson Seedless is also a good wine grape and a good raisin grape, while the Malaga is also fair for raisins. These are safety propositions as an alternative in case shipping does not develop as anticipated.

### Rye Grass for the Colorado Desert.

TO THE EDITOR:—As a subscriber to your valuable paper I wish to be informed whether rye grass is a good grass for fattening stock and which is the best kind for such purposes, as I understand that there are several kinds of rye grasses. I propose to try it in the Imperial country of the Colorado desert.—R. D. PERRY, San Diego county.

There are two species of rye grass in common use, *Lolium perenne* and *Lolium italicum*. The former is the English, or as commonly called in this State, the Australian rye grass. This is the hardier species; most drouth resistant and longer lived in the root. It is the one which has been most widely used and approved in this State, though recently the Italian species has come into use and is so far approved on low moist lands. Just what it will endure is not fully known. Neither of these grasses need not be expected to do at all on the desert country except with irrigation, and how far they will stand the high heat and dry air even when irrigated is still to be determined. So far as irrigation or overflow go they are durable, and make great growth even with sewage irrigation if the temperature conditions suit them. They are both grasses of rather coarse character and medium richness. They cannot compare with alfalfa in feeding value, but they are good winter growers and in this way are available while alfalfa is dormant. To find their local value in the Imperial region experiments must be made—wisely on a small scale.

### Self-Sucker—Red Spider—Frost and Fruit Buds.

TO THE EDITOR:—Will you please inform me through your columns of the powder which, when rubbed upon the bag of a cow, will break her of sucking herself? Several years ago there was a piece in your paper which stated that red spiders could be killed by putting saltpeter in the crotch of the tree. Has it ever been tried and, if so, with what success? Will frost at this time of the year injure fruit buds?—D. W. POWER, Chico.

We never heard of the success of any repellent powder; but you might get a nickel's worth of quas-



sia chips, make a tea and when cool rub a little on the teat. Be very careful afterwards to milk dry-handed, or you will feel worse than the cow does when you get a taste of the milk. We never heard of any success with the saltpeter remedy for red spider. Such degrees of frost or freezing as we have in California valleys and foothills do not injure buds when dormant, as they now are. On the mountains they may freeze, just as they do at the East. Our chief trouble is with frosts after activity in the tree begins, and then a little frost may go a long way.

Rocky Ford Melons.

To THE EDITOR:—Where can I get true seed of the individual or Rocky Point muskmelon. I am very anxious to get the genuine variety.—READER, Placer county.

We presume what you refer to is the Rocky Ford muskmelon, which has become famous through its large production at Rocky Ford, Colo. It is a selected variety of the Netted Gem, and is now so popular that its seed is to be had from all reputable seed dealers. If you write to seedsmen in San Francisco you ought to have no difficulty in securing seed of the true type.

Renovating an Old Vineyard.

To THE EDITOR:—In treating an old neglected vineyard, will it do to prune closely in February, and plow close to the vines, even if some roots are torn up?—READER.

It will be all right to prune the vines of which you speak in February, and to cut them back quite closely, being careful, however, to give most wood to what seem to be the stronger vines, and cutting back the weak ones, and thinning out the spurs somewhat if need be, painting the cuts wherever large. It will probably be necessary to sacrifice some of the roots in getting the soil into good condition, and it ought to be possible to plow with a single plow quite close to the vines, turning to a depth of 3 or 4 inches near the vines and much deeper farther away from them. We should dig around a little first to see about the rooting of the vines before starting in with the plow, because sometimes neglected vines develop a surface root system and cast off the lower roots. In this case, plowing near the vines would be disastrous. If, however, you find surface roots and also good roots coming out from the lower points, the surface roots can be sacrificed without permanent injury to the vine. In such case one has to be governed by observation and judgment rather than by any fixed rule.

Treatment for Crown Borer.

To THE EDITOR:—Is coal tar injurious to prune, peach or apricot trees, if applied to injured parts or to the holes made by borers? Some use whitewash, with 10% of coal tar added, which is applied to the trunks after digging out the borers. There is such a difference of opinion regarding the effects of coal tar, I shall be pleased to see your answer. It seems to be a good thing, and I desire to use it if safe. Is it best to fill up the holes around the trees, or leave them open all winter? If left open, is there more danger of the borers going below the first roots than there would be if closed? Do you advise the use of bisulphide of carbon? If so, please give direction for borers.—SUBSCRIBER, San Jose.

There is ample evidence that coal tar can be safely used. It is pine tar that is dangerous. In using coal tar, however, we would apply it sparingly and only to the wounds, and not plaster the bark with it. The effect is to stop decay of the cut bark and prepare for the healing of the wound with new bark. If you wish to cover the whole surface, the preparation of whitewash with coal tar is safer, because it reflects heat instead of absorbing it as a black surface does and thus induces sunburn. Although there is reason to think that free use of coal tar is safe so far as its direct effect is concerned, the indirect effect in the way of sunburn is of considerable moment in California at least.

Leaving the excavations around the base of the tree open is desirable when no coal tar is used on the wounds, because this allows the cut surfaces to dry and thus prevents their decaying, as they would be likely to do in moist ground at a time when the tree is dormant and new growth not active. But the

holes should not be left open too long, but should be closed after the heavy rains are over. If the holes are open in the spring when the new moths appear they are able to lay eggs low down, and the danger is greater of the worms working deeper.

We do not advise the use of carbon bisulphide, because so many report injuries from it, but we have not yet received evidence that the careful application to the ground around the crown, and not immediately to the bark, has resulted in injury.

Chinese Hogs.

To THE EDITOR:—Do you know any one in California who has for sale a full-blooded China boar. I do not want any Polish blood in him.—READER, Tehama county.

The straight Chinese have nearly gone out of sight since the development of the great American hog, the Poland-China. There are a few breeders in the United States, but none now known to us in California.

Steam Plowing in California.

We recently alluded to the introduction of an English steam plowing outfit into the sugar beet district of Ventura county, and last week we printed a note from a correspondent in that county alluding to its work. We have also mentioned the California-made steam plowing outfits which work by a direct pull and not by cables from head lands. This arrangement has decided advantages, under suitable conditions, and we are sure our readers will be interested



A Daniel Best Traction Engine Near Alessandro, Cal., Pulling 40 Feet of Plows, Cutting 4 Inches Deep, Speed 3½ Miles Per Hour.

in the view of such an outfit in operation as given by the photoplate on this page. As stated, the traction engine is one of the well-known manufacture of the Best Manufacturing Co. of San Leandro, Alameda county. It is owned by J. Thomas Kerr of Alessandro, Riverside county, and during the harvest it is very satisfactorily used as a motor for a Best steam harvester. Afterwards it is used in plowing, as the picture shows. Of its performance a writer in the Riverside Enterprise says:

The big engine "Barney" at the Kerr ranch has already plowed 2300 acres which was seeded ahead of the plow and is now nearly all up, the barley fields being covered with a fine green growth.

When the engine was first put to plowing it carried thirty-three shears, which were increased soon to forty-three and now to fifty-five. At first ordinary gang plows were fastened to a cart evener, but now one ten-gang plow, three nine-gangs and three six-gangs are being used. They plowed about eighty acres per day to begin with, and have increased the area to 125 acres per day at an average of nearly fifteen acres per hour. The plows do beautiful work, smooth and fine. Though the dirt flies up from each shear from 2 to 3 feet, the engine swings along faster than a good team can walk and does not sweat under the collar. It would take 100 head of horses to do the same work.

The engine keeps two water bucks hauling water continually on tank wagons, each tank containing 600 gallons. Each tank wagon carries also a 100-gallon oil drum set in front in car stakes prepared purposely for the drums. The engine also carries an extra oil drum. This engine is a wonder, so practical and perfect in every way that every man and boy who has a leaning toward mechanics should see it. They have plowed rain or shine. It's a regular web-foot.

As the above account shows, the width of the swath was increased to 55 feet after our photograph, which represents 40 feet, was taken. It is a won-

derful performance and is perhaps the greatest of the recent economic achievements which have enabled California to stay in the wheat business in the face of competition in Europe, with the Argentine and other nearer and newer wheat countries. Such achievements are honorable to California.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending December 23, 1901.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

The weather has continued about the same as during the preceding week, with temperature somewhat below normal, heavy frosts and no rains. Very little damage has been done by the frosts except to garden truck. Green feed is still plentiful in most places, and stock are doing well. Grain is making good growth and is of healthy color. Plowing and seeding are progressing. Prospects continue good for a large acreage of grain. Orchards and vineyards are in good condition.

COAST AND BAY SECTIONS.

Fair, cool weather has continued during the week, with heavy frosts in some sections. New grass has been damaged by the frosts in some places, but green feed is still plentiful, and stock are in good condition. Grain has made rapid growth and is looking strong and healthy. Plowing and seeding are progressing. In some of the southern counties the soil is becoming rather dry for cultivating, and rain would be beneficial. Pruning continues, and orchards and vineyards are in excellent condition.

SAN JOAQUIN VALLEY.

The weather has continued cold and generally clear during the week, with occasional fogs. Minimum tem-

peratures of 20° and 21° are reported in several places, and severe frosts have been frequent throughout the valley. The damage to citrus fruits has been light, but a few oranges remaining on the trees were ruined. Young orange orchards and nursery stock have been considerably injured, and tender plants and new grass damaged. Grain has not yet been injured by the cold weather, and is in good condition, but would be benefited by rain. Green feed is plentiful. Plowing and seeding continue, though slowly in some sections, and the grain acreage will be considerably curtailed if rain does not fall soon. Vineyard and orchard work is progressing.

SOUTHERN CALIFORNIA.

The weather has been considerably warmer than during the preceding week, and generally clear and pleasant, but with cool, frosty nights in some sections. Grain and grass are being somewhat injured by continued cool weather and absence of rain. No definite reports of the damage to citrus fruits by the severe frosts of the 13th and 14th have been received. The correspondents at Anaheim and North Ontario report very little injury to oranges. The orange crop is maturing rapidly, and heavy shipments are being made. Rain is needed.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Tuesday, December 24, 1901, are from official sources and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Maximum Temperature for the Week...	Minimum Temperature for the Week...
Eureka.....	.06	16.07	20.21	15.99	56	38
Red Bluff.....	.00	9.66	8.81	8.38	53	34
Sacramento.....	.00	5.98	7.68	6.61	60	30
San Francisco.....	.00	5.80	7.22	6.14	64	44
Fresno.....	.00	2.17	5.43	6.33	64	30
Independence.....	.00	1.34	2.31	1.77	64	30
San Luis Obispo.....	T	4.56	10.20	5.65	60	30
Los Angeles.....	.00	2.46	6.79	6.41	66	40
San Diego.....	.00	.77	1.73	2.69	74	40
Yuma.....	.00	.22	.02	1.62	76	44



## ENTOMOLOGICAL.

## A Half Year With Good and Bad Insects.

By ALEXANDER CRAW, Quarantine Officer of the State Board of Horticulture.

My semi-annual report includes the summer months that are usually light in import of nursery stock. There have been received and inspected, however, eighty-seven crates, cases and bundles of trees and plants, besides 148 loose lots, numbering from one to eleven plants in each lot, 7774 cases of citrus fruits, mostly limes, 1593 crates of pineapples and 1668 packages of miscellaneous fruits.

The above was found upon 132 steamships and sailing vessels that have reached this port since my last report. I am present during the landing of passengers and the examination of their baggage. As heretofore, all plants, trees and fruits infested with injurious insects or diseases new to the State, have been destroyed.

**MONGOOSE DESTROYED.**—Another mongoose was taken and killed on the 6th of June and presented to the Academy of Sciences for their collection. On June 7th, a Los Angeles paper referred to the existence of a live mongoose in that city in a Broadway store. I immediately wrote to Horticultural Commissioner J. W. Jeffrey, of Los Angeles, requesting him to take action under section VI of the Act of March 11, 1899, and see that the animal was destroyed. Mr. Jeffrey learned that it was brought into the State by rail from a Texas port and died soon after its arrival.

**JAPANESE CRICKETS.**—On May 31st, we destroyed an importation of several thousand Japanese "song cricket" eggs. The importers claimed that they had a certificate from Dr. Stuart Eldridge, Asst. Surgeon U. S. Marine Hospital Service, Yokohama, Japan, certifying that the insects were not injurious to plantations or fields, but the certificate was not produced. I wrote to Dr. Eldridge and he sent me a copy of a letter he had forwarded at the time to the Collector of Customs at this port, showing that he had done all in his power to prevent harm from the importation in question. The following is a copy of Dr. Eldridge's letter:

"The eggs are those of a species of cricket, called by the Japanese 'Kutsuwa-mushi,' which is kept by the natives in cages on account of its musical cry. It is, of course, a vegetable feeder. In Japan, it has never, within my knowledge, proved injurious, but, in view of the sad and unexpected results which, in some cases, have followed the introduction of exotic animals into fresh territory, I think it well to call attention to this shipment."

At various times heretofore we have destroyed living specimens of these crickets that came in fancy, split bamboo cages from Japan. We have all the species of vegetable eating crickets, katydids and grasshoppers in the State that we care for. The song of "Kutsuwa-mushi" would hardly compensate for the damage it would probably do.

**ORANGE MAGGOTS.**—Occasionally we find a few oranges in the possession of passengers from Mexico which we confiscate and destroy. But no shipments of such fruit have been received from the maggot infested district since the destruction of the consignment received from Acapulco, Mexico, Nov. 19, 1899, until Sunday, Nov. 3d of this year, when the S. S. Newport arrived, and in her cargo were fifteen cases of oranges in which the maggots were present. I condemned the fruit and boxes and burned them. I hope that Congress will take some action at the coming session and pass a law that will prohibit the introduction of oranges from the infested sections. If a measure of this kind is not enacted the growers of citrus fruit in the United States may have to wage warfare upon a pest that will be more difficult to control than the codlin moth in apples and pears. I do not anticipate any satisfactory results from the Mexican Government's request to the Governors of the various States to have the pest stamped out of their districts. It is too serious a question for our Government to hesitate upon. From a personal interview with Secretary of Agriculture Wilson I am satisfied we can rely upon his hearty co-operation in preventing such a pest entering the United States.

**THE HAWAIIAN MAGGOT.**—Another perplexing question is the presence of the melon-cucumber maggot in Honolulu. Honolulu is now a domestic port, and the examination of baggage by Customs Inspectors has been discontinued, so the pest may be brought in by thoughtless individuals bringing infested melons or cucumbers in their baggage. This pest is probably a native of Japan, as I have intercepted its coming from that country. It is not known to occur in the United States. As heretofore, no products that would harbor this pest have been permitted to land. I hope your honorable board will advise me further as to what should be done to ward off that disgusting pest.

**A RED CURRANT PEST.**—Last June a serious red currant pest (*Epochra canadensis*) was forwarded to me from Sebastopol, Sonoma county. This is the larvæ of a small fly. It enters the currant, causing it to shrink and decay. I advised the destruction, by burning, of all the currants, and to remove the

surface soil and bury it deep between the rows. This would get rid of any that had entered the soil to pupate. It cannot be ascertained how this pest was introduced. Sonoma county, unfortunately, dispensed with its County Horticultural Commission a few years ago.

**NEW SCALES.**—During the past summer the Horticultural Commissioners of Tulare county stopped some ornamental plants at Lindsay, which were from the East and were infested with scale, samples of which they sent to me for determination. I found them to be the "Florida red scale" (*Aspidiotus ficus*), a pest of orange trees. This was a fortunate seizure, as Lindsay and Porterville are noted as early citrus districts.

The Commissioners of Los Angeles county recently found some ornamental plants from the East infested with the "Florida chaff scale" (*Parlatoria pergandeii*), another citrus pest. (The Commissioners of Riverside county, San Bernardino and several other counties, have lately found important pests on ornamental stock from Eastern States.

**THE WHITE FLY.**—The Supervisors of several citrus growing counties have strengthened the hands of their Horticultural Commissioners by passing ordinances against the introduction of citrus trees from States where the "white fly" (*Aleyrodes citri*) exists. This is a wise movement in the interests of their citizens.

**OTHER SCALES.**—On October 18th the steamship Australia arrived from Tahiti, and a passenger had a package of vanilla stems on which I found a single "red scale" (*Aspidiotus aurantii*). This shows the existence of that scale in Tahiti. Another scale from the same place was found infesting a package of Tradescantia plants, which I destroyed. This was *Icerya seychellarum*, a near relative of the "cottony cushion scale." It is smaller than the latter and the back of the female is covered, or rather circled, with a double row of tufts of canary-colored cotton. Down the center of the back is a row of similar tufts. The egg sac is pure white.

From Australia came two orange trees infested with *Chionaspis citri*, the "orange snow scale," also a holly bush with *Ceroplastis rusci*. All were destroyed.

From Mexico came plants infested with the following scale insects: *Parlatoria*, *Aulacaspis*, *Ceroplastis* and *Asterolecanium*.

From Guatemala came palms infested with "red scale" (*Aspidiotus aurantii*).

From Japan, Biotas, with *Tortix* larvæ feeding upon the foliage, and pine trees with "basket worms" (*Thyridopteryx*). The white circular scale (*Diaspis amygdali*), I again found upon tea plants from Japan. This scale is a serious one wherever found upon peach, cherry, prune and, in fact, upon nearly all deciduous fruit trees and a number of ornamental plants.

**OLIVE KNOT.**—According to your instructions, I visited Tehama county on June 3d and 4th and investigated the reported existence of the "olive knot" (*Bacillus oleæ*) in several young orchards. With Mr. Harvey C. Stiles I visited a number of young olive orchards, and although we found indications of the disease, there was no appearance of any virulent cases. This may have been owing to the fact that the trees had been planted within the year. It was the desire of a number of the orchardists to have the disease stamped out of the country, if possible, and as they anticipated some opposition upon the part of non-resident owners, I submitted the matter to the Attorney-General to ascertain if the County Horticultural Commissioners or the State Board of Horticulture could take any action toward stamping this disease out of that and other counties where it has appeared. The opinion of the Attorney-General is given on pages 53 to 57 inclusive of your bulletin "Horticultural Statutes of California." It would appear that the County Horticultural Commissioners have power to abate such nuisances in their respective counties. There is nothing, however, in our statutes conferring such power upon the State Board of Horticulture. It is to be hoped that the County Horticultural Commissioners will see that the destructive olive disease is stamped out of the State.

**A TREE CASE.**—On June 21st I was requested by District Attorney Gill of Tehama county to visit Red Bluff and testify regarding a shipment of fruit trees received from Oregon that were condemned and destroyed by Horticultural Inspectors R. W. Coates and A. W. Samson. The trial of the case had been proceeding for four days. Samples of the trees had been submitted to me by the inspectors and I had specimens of the roots preserved in formalin, which I took with me, and they were introduced as exhibits in the case. Owing to the fact that the County Horticultural Commissioners had omitted to make application to your Board for quarantine guardian certificates for their inspectors, the Court decided that the inspectors were not qualified to act and decided the case against them. The trees, however, were adjudged to be of no commercial value, and the plaintiff was awarded damages fixed at the nominal sum of \$1.

**BENEFICIAL INSECTS.**—It gives me pleasure to report to you the receipt of two packages of *Scutellista cyanea*, the South African internal parasite of the "black scale;" seventeen were alive upon arrival

and were immediately placed in a breeding case containing an oleander infested with black scale. One has since died, but the others appear to be active. The parasites were sent by Prof. C. P. Lounsbury, Government Entomologist of Cape Colony. The Cape government is very anxious for California to have this valuable insect established here. I am in receipt of a telegram from Dr. L. O. Howard, U. S. Entomologist, Washington, D. C., which reads: "Have at last got living *Erastris scitula* from Italy. Black scale enemy. Can you handle them to best advantage?" I wired him regarding the condition of our scale. Besides your own efforts to secure the natural enemies of this scale, it is encouraging to record the work of such men in behalf of our orchardists.

Dr. Howard has been conducting experiments with a parasite fungus from South Africa for the destruction of grasshoppers. At my request he has kindly forwarded tubes containing the fungus cultures to citizens of this State with full instructions for establishing the disease. It is stated that the fungus will not affect human beings, domestic animals or fowls.

On Nov. 18th, Dr. Howard forwarded a colony of *Coccinella septempunctata*, ladybirds that he received from Europe that prey upon prune and other aphids. Upon their arrival I placed them in a breeding jar with a piece of wet white silk. The ladybirds sipped some moisture from the silk and then clustered on the cover for the night. Next day they were given rose aphids, which they greedily devoured. As soon as the season comes around they will be placed in a prune orchard.

**DISTRIBUTION TO OTHER SUFFERERS.**—I have to report that the colonies of *Vedalia cardinalis* sent through the courtesy of your Board to Prof. H. A. Gossard of Lake City, Florida, and others in that State, have been wonderfully successful in checking the "cottony cushion scale" (*Icerya purchasi*). A comprehensive bulletin was issued by Mr. Gossard, giving a history of the unfortunate introduction of that pest into Florida, its spread through their orange groves and of its subjugation by the *Vedalia*. We still keep up a stock of the four species of introduced ladybirds that prey upon this scale, viz: *Vedalia cardinalis*, *Novius koebele*, "Black *vedalia*" and *Novius bellus*. The first two were introduced by Mr. Albert Koebele and the other two by Mr. George Compere.

An outbreak of "cottony cushion scale" occurred in Guaymas, Mexico, and at the request of a citizen of Los Angeles, a colony of *Vedalia* was sent to check the scale.

The Hon. Theodore Schneider, Commissioner of Chile to the Pan-American Exposition at Buffalo, visited this State at the request of his Government, and we furnished him, through the kindness of Mr. Wm. Barry of Niles, with strong colonies of *Rhizobius tomentosus*, and *R. ventralis*, which he took to Chile via New York.

**MR. COMPERE'S WORK.**—In order to check the destructive introduced pests of fruit trees, you have sent two experts to Australia at different times, to find the natural enemies of these pests and introduce them into California. One of the pests that the experts were especially requested to give close attention to, was the "red scale" (*Aspidiotus aurantii*). Australia and adjacent islands have been twice ransacked by Mr. Koebele and once by Mr. Compere. Several species of ladybirds that prey on this scale were collected and forwarded by them, but no true parasite was found in those countries.

**RED SCALE DESTROYER.**—Mr. Compere was directed by you to also visit the Orient. At Hong Kong he found evidences of internal parasites in the "red scale." He could find no suitable tree there to send to California, so in spite of the "Boxer" trouble in China, he ventured into that country and succeeded in finding a small orange tree slightly infested and on which he observed the small chalcid flies depositing their eggs in the scales. He purchased the tree, carefully dug and boxed it, and shipped it to San Francisco. In its native place the ground was overgrown with a dense crop of weeds that covered the stem of the tree for a foot or more. The portion so covered was badly infested with "red scale," as they were protected from the parasites by the weeds. The tree arrived in San Francisco on November 21st, 1900, and was placed in a glass breeding case. The scales hatched on the base of the stem and soon infested the upper portion of the tree and leaves. I did not expect that any parasites would appear before June, as most of the internal scale parasites generally issue about that time. On May 31st, six parasites appeared; none in June, thirty-six in July, eighty-one in August, 143 in September, 381 in October, and up to November 29, 885, making a total of 1532. These have been liberated in "red scale" infested orchards in Los Angeles and Orange counties. Owing to our removing the parasites as soon as they develop, the scales are quite plentiful upon the imported tree.

The parasites are hardly noticeable to the naked eye, as they are slightly smaller than *Aspidiotophagus citrinus*, the internal Japanese chalcid parasite of the "yellow scale" that has practically stamped that former pest out of Los Angeles, Riverside and San Bernardino counties.

Prof. Charles P. Lounsbury of Cape Colony is an



enthusiastic believer in the value of beneficial insects, and on page 26 of his report as Government Entomologist for 1900, referring to the "red scale" which is also a pest with them, he says: "The Californians have always believed that the scale originated in Australia, as they are confident that it reached their State from there; but now that they have had that land searched in vein for natural enemies, they may turn their attention to the south of Europe. We hope so." This is a fervent wish, but our little chalcid friend has come back from the other side of the world. An encouraging feature of these parasites is the fact that they prefer the scales before they have reached the stage where they reproduce their kind.

**RECAPITULATION.**—With the exception of the "cottony cushion" scale, internal parasites have been the means of subduing or keeping in check most of our serious introduced scale insect pests, among which may be mentioned the following: The "yellow," by *Aspidiotophagus citrinus*; the "soft brown," by *Coccophagus lecani* and *Encyrtus flavus*; the "brown apricot," by *Comys fusca*; the "San Jose," by *Aphelinus fuscipennis*; "mealy bugs"—out of doors—by *Rileyia splendens*; "cottony grape scale," by *Encyrtus flavus*.

Let us hope that the Chinese parasite of the "red scale" will prove equally successful.

## THE ORNITHOLOGIST.

### Birds in Agriculture and Horticulture.

By W. O. EMERSON of Haywards at the State Fruit Growers' Convention.

The beneficial relations of birds to agriculture and horticulture are of untold value, not easily expressed by figures of speech. We find in this age of rapid advancement in the modes of producing the best results from the soil that man strives in every way to protect his holdings. This is as it should be and shows his desire for increased knowledge and his elevation to a higher plane in this world's affairs.

After years of careful research it has been proven that bird life has certain functions to perform in guarding the food supply of the earth, just as the hills carry the fallen rain down to the lower levels, and as the grass blades and leaves protect the seeds, blossoms and fruits against damage.

**BENEFITS OF BIRDS.**—If it were not for our feathered tenants about us, our existence would be only for a few short months of hard battling against the hordes of insect pests. There are many species of beneficial insects to which we have been devoting time and money in introducing in the orchards of this State to destroy other tree pests, but even these same insects can become destructive to our fruits, as has already been recorded, where they have attacked peaches, apricots and even apples, so defacing them as to render them unfit for market.

**CLASSES OF BIRDS.**—We have two great classes of the Avis family—water and land birds. The former I shall not refer to at present, as they do not especially interest the farmer or fruit grower, but as to the latter class we will see what part they play in the conditions of our existence.

We can divide the land birds into many groups, such as carnivorous, insectivorous or partly so, and grainivorous, wholly or in part. It is only within the last ten or twelve years that any attention has been given to the investigation of bird foods at the hands of ornithologists, particularly those connected with the Department of Agriculture.

**HAWKS AND OWLS.**—One of these groups of birds that should have more care given them are the raptors or birds of prey. Of the hawks and owls, of which we have some ninety varieties distributed over the United States, we find seventeen of the hawks throughout our State, besides ten varieties of owls. Of the hawks only two species have proven harmful to the farmer's interest. These are commonly known by the name of Cooper's and sharp-shinned hawks, both feeding on small birds and game.

Cooper's hawk is of a dark-brown color, excepting under parts of the body, which are white, having markings of brown in long dashes; eyes and legs, yellow; tail having broad bars or bands of grayish white, both sexes being similar; length of bird, sixteen inches. The sharp-shinned hawk is of a reddish brown or slate color on the back and wings; breast of light-reddish color, barred across with markings of the same color, but darker; tail, banded; eyes and legs, yellow; legs, slender and very long; length of bird, ten inches.

In referring to Bulletin No 3 on Hawks and Owls by Dr. A. K. Fisher, United States Department of Agriculture, we find that out of 2212 stomachs examined only 3½% contained poultry and game, while 56% were mice and other mammals, while 27% was of insects. In this analysis of the stomachs of hawks and owls it will be seen that a large number of rodents are destroyed, resulting in the farmer's welfare.

**THE HEN HAWK.**—One of the most common raptors, known as the hen hawk, and at whose door is laid all the charges of chicken stealing, is the Western Redtail hawk (*Buteo borealis calurus*). It can

be seen almost any day the year around circling over the hills and valleys, or on watch for some unguarded squirrel, of which they are great hunters. Mice and grasshoppers make up much of their diet, the birds' crops being often packed with them. A specimen which I shot in February contained five mice. This species of hawk has two plumages; adult, dark brown over back; wings and tail barred with same; under parts and the entire breast a rufous-brown, spotted with a darker shade of the same color. The young of the year are without any of the rufous under parts and are dashed only with dark brown.

In some States bounty laws have been passed for the scalps of hawks and owls. Pennsylvania, in 1885, passed such an act, which cost her in just nine months the sum of \$90,000. Now compare this with the aggregate amount of damage done to crops by rodents and insects in that same State annually, which is about \$5,000,000. This may seem a large sum, but is only a drop to what other States have suffered, such as Illinois, which lost \$73,000,000 in 1864 by the ravages of the cinch bug. Missouri by the same bug in 1874 lost \$19,000,000.

**OTHER HAWKS.**—Other useful hawks we have in our State are Swainson's, the red-bellied and the little falcon, known as the Desert Sparrow Hawk. This latter species is often blamed for the depredations of the sharp-shinned hawk. The sparrow hawk feeds entirely on insects, such as beetles, grasshoppers, mole crickets, field mice and lizards. His favorite lookout is from any fence post or crossbar of a telegraph pole. They can be easily recognized from other small hawks by (male) dark, slate-colored wings, a hood of the same color with a crown of chestnut red; the whole back barred with black; tail barred with same colors. The female is chestnut brown on back and wings, lighter on breast, barred with a darker color; tail the same. Both sexes have white cheeks and a black mark running down from the front of and back of the eye; legs, yellow.

A few words as to the benefits derived from the owls (*Strigidae*) by the farmer and orchardist. The barn owl takes precedence as being most beneficial about the orchard, field and farm buildings. They will destroy more rodents in one night's hunt than a dozen cats, six mice and two or three gophers being a small bag for one owl and its brood. Gophers go largely to make up its diet and it is not uncommon to find five or six in the nesting or roosting places in hollow tree limbs or even in steep holes in banks. The general color of the barn owl is ochraceous-yellow, more or less speckled or marbled with black. The eyes are black and the feet are feathered to the toes.

One of the smaller cat-like owls, known as the California screech owl, of mottled gray and black, spends most of its time among the orchard trees and stubs catching great numbers of small mammals, crickets, beetles and other insects. Out of 255 stomachs examined of this little scow, ninety-one contained mice, one hundred insects, and forty-three empty, showing the amount of good they do among our trees. Other species of owls beneficial are the burrowing owl, short-eared and long-eared owls. The former is seen about the holes of squirrels and has the old habit of trying to screw its head off if you pass around him. This owl occupies an important place on the farm in keeping down small rodents. The short-eared and long-eared owls are great mousers, as also is the great horned owl, who will, when chance comes his way, take a roosting chicken out of the trees or bushes.

**INFORMATION DESIRABLE.**—The farmer and fruit grower have not, as a rule, given the proper attention to the observation of bird's habits, nor have they had access to convenient information, but happily the times are changing so that our State agricultural stations are issuing important bulletins from time to time. Of the many other birds that are related to the farmer may be mentioned the meadowlarks and blackbirds, which I will call your attention to at another time. What orchardist in this convention has taken the time to spend an hour, much less a day, among the birds of his orchard? Or did you ever try to count all the birds seen, or ascertain the number of times a parent bird carried insects to the gaping mouths of its young? These seemingly small facts play a more important part in the life of our trees than can be told in words. Take our little red-capped, chipping sparrow, who builds its nest in your apple or pear trees; they will make from fourteen to twenty feeding trips an hour to the nest, and in some cases the animal matter counts up into ounces instead of grains, according to the demands of the young birds for food.

In watching the work done by the warbling vireo, bush-tit and the gold-finches in picking the limbs and branches clean of spiders, larvae and scale we should realize that the work goes on the year round. Kinglets, juncos and warblers will be seen any day during the winter cleaning the bare branches of scale. The little mouse-like bush-tit of plain gray color moves in large flocks among the trees, feeding industriously on the bark louse, spiders and scales. Stomachs that have been examined at the Biological Survey of the Department of Agriculture contained the black scale (*Lecanium olcae*) from the California olive groves. (See "Yearbook," 1900, page 296. "How

Birds Affect the Orchard," by F. E. L. Beal, B. S., Department of Agriculture, Washington, D. C.)

**ORCHARD BIRDS.**—Some birds found in our orchards, as the California brown towhee, black-headed grosbeak, Brewer's blackbird and Bullock's oriole are charged with the destruction of the fruit more or less in some localities, a fact in common without insectivorous birds, such as the small thrushes. This could to a certain degree be remedied by the planting of a few trees of wild cherry, elderberry or mulberry throughout the orchard or along the fence lines, as all birds prefer wild fruit to domestic when obtainable. This will be noted where there are wild vines or berry-producing shrubs and trees. I have often watched the thrushes, robins, and even some of the smaller fly-catchers feeding on the elder, wild holly or madrone fruits.

Every few years will be heard of vast numbers of some bird sweeping down on the orchards, causing sometimes great damage to crops. These depredations in many instances are in isolated glens or hill slopes, particularly those adjacent to wooded tracts. The early fruits are very tempting morsels to the birds in addition to their regular diet. In years of drought or late frosts the wild fruits will oftentimes be less abundant than the tame and then the birds are at the worst on crops. Another cause is the late continuous storms in the tracks of migrating birds, particularly of northern or mountain-breeding species, which will cause a change in movements and the birds to tarry, especially if there be plenty of ripe fruit in the locality.

A case that occurred some years ago was that of the Louisiana tanager, which made its appearance first at Pasadena during May, 1896. They came by thousands to the great loss of the cherry growers, one orchardist not getting enough out of his crop to pay for the powder and shot used in trying to rid his orchard of them. Three thousand tanagers were counted on one piece of land. Ten days later I noted them around Haywards, Cal., for two weeks, they being present in great numbers in the small out-lying tracts near the foothills. From that year to the present time they have only been seen in a few single instances. Another case worth mentioning, as it has caused a great deal of discussion on the question of bird protection, is the appearance of robins in the Santa Clara olive orchards. As to whether or not the robins will keep up their record as each season opens remains to be seen.

Where there is a necessary food supply spread over the country and natural conditions prevail there is, as a rule, no great movement of birds toward the cultivated areas. When nature changes any of her food supply fields it also has the tendency to change the habits of fauna inhabiting the region, and sometimes man's crops must suffer. Note the influx of great bands of wild pigeons driven from their snow-covered summer home to southern climes last spring. This came about seeding time about the bay, and the farmers were up in arms causing the pigeons to be shot by thousands. A four-horse wagon could have been loaded in one field below Alvarado, Alameda county.

**THE WOODPECKERS.**—All the woodpeckers (*Picidae*) are valuable tenants of the orchard, excepting, perhaps, the red-breasted sapsucker, the only variety of this group found along the coast region of California, they being only a winter visitant from the high mountains. They will be found about the apple, pear and orange trees pecking a series of holes encircling the trunk or limbs as the case may be. They seem to feed on the inner bark and the sap which collects in the holes.

Among the nut growers complaint is made of some woodpeckers, notably the California and Lewis' damaging the nuts, but if carefully inquired into it will be found that larvae or worms exist in the nuts so pecked. The woodpeckers are great hunters after wood pests, hammering away at the abodes of the grubs and borers. The red-shafted flicker is a fine codlin moth trap, even going into the apples after them, let alone cleaning out the ground around the base of the trees. The peach growers will find the flickers good friends if given a chance by removing the earth from about the base of trees for several inches in the early fall. We have three other species of small woodpeckers, black and white in color with spotted wings, a stripe down the back, breast plain whitish with red patch at the head in the males. They are the Cabanis', Nuttall's and Gairdner's woodpeckers, Nuttall's having a spotted breast. The former species is twice as large as the latter two. Other useful birds are wrens, titmice, warblers, thrushes and flycatchers. All of these are highly insectivorous and should be protected all the year round by the farmer and fruit grower, who should recognize in them most able allies in the welfare of the farm.

## RURAL AFFAIRS.

### The Dearth of Husbandmen.

**TO THE EDITOR:**—To me one of the most interesting speeches in the late convention of California fruit growers was Mrs. Shafter-Hamilton's lament that so few men of wealth were interested in rural pur-



suits; and so few capable farmers available as tenants on her 18,000 acres in Marin county.

She asked, "Why is this so?"

"Nine-tenths of men," said Locke, the philosopher, "are what they are by their education."

If this be true, education is responsible for the lack of love for agriculture. Now who's responsible for the education? Very largely the mothers themselves! What is their ruling idea in the matter? Is it that their sons shall learn to be strenuous men doing a valiant share of the world's toil? Is it that their daughters shall be trained for their duties as wives rearing noble families? Is it not rather that their sons shall learn some soft-handed method of evading honorable labor by the clever and profitable exploitation of their fellows; and their daughters long to be wives of multi-millionaires, lolled in the lap of ostentatious idleness, too full of vanity and selfishness even to discharge maternal duties.

One day I was discussing with a knot of high school boys the benefits of their high school career. One, the toughest of the lot, said: "It has made gen'l'm'n of us!" This, being interpreted, meant as above. It had made them think that the very small amount of training given to their very small amount of brains had entitled them to become parasites on the world's workers. Henceforth the world owed them a living. Perhaps it did; but there are two kinds of debts, good debts and bad debts. Seeing the world has received no value from these young people, the debt is probably a bad debt, and its collection will be not without difficulty.

Thank heaven we now have a President mightily imbued with the gospel of work. Happily he may help to change the present fashion of genteel uselessness into one of strenuous manliness and a physiological life; a life of outdoor labor and sweat; a life alike conducive to happiness and health and prosperity; a life that shall long keep the American people on the upgrade, and not tend to race degeneracy as does the passing rage for town life.

One more cause of the dearth of husbandmen is the very system of tenant farming that Mrs. Hamilton follows. As the system is usually pursued in California, the landlord skins the tenant and tenant skins the land. So, instead of husbanding the land's resources, or even increasing them from year to year, as does the true husbandman, the tenant's policy necessarily is to take all he can and give nothing back.

Obviously a really capable man prefers buying his land, because every improvement he then makes inures to his personal and sole benefit. Then as a rule the tenant farmer's surroundings are not desirable. The place he temporarily calls "home" is not attractive; and if a man has not an attractive home, however humble and modest it may be, he is not by any means likely to do good work in life. No doubt Mrs. Hamilton, with her enlightened views and obvious talents, avoids these undesirable features of the renting system, but she must be aware that they obtain notably in California. That they may soon give place to the more ideal method of many small freeholders is the earnest desire of many.

Monterey, Dec. 12, 1901. EDWARD BERWICK.

WHILE we know that the earth is a magnet, no one is able to say what makes it so. The fundamental secret of terrestrial magnetism has not been solved. Then, too, there are various changes in direction which mark the behavior of the needle that remain to be explained. These questions are often asked: "What influence is it that makes the needle swing to and fro to a microscopic extent every day? Why is it that the diurnal swing is greater in years of sun spot abundance than at the minimum stage of solar activity? Why do the indications of the needle differ in summer from those of winter? What is the key to the mystery of the long period movement that makes it necessary to rechart the situation? What causes the convulsive behavior of the magnets for a few hours or days when there is a great outbreak of sun spots? And is there any relation between the weather and the fluctuations in the earth's magnetism?" There are theories on these subjects, but no generally accepted doctrines, but the human mind is so constituted that it will not rest until further light is obtained.

THE date line coincides with the meridian 180° from Greenwich. It deflects between north latitudes 80° and 45°, so that all Asia lies to the west, all North America, including the Aleutian Islands, to the east of the line; and between south latitudes 12° and 50°, so that Chatham Island and the Tonga group lie to the west of it. A vessel crossing this line to the westward sets the date forward by one day, as from Sunday to Monday. A vessel crossing the line to the eastward sets the date back one day, as from Monday to Sunday. Hawaii has the same day name as San Francisco; Manila, the same day name as Australia, and this is one day later than the day of Hawaii. Thus, when it is Monday, Dec. 9th, at San Francisco, it is Tuesday, Dec. 10th, at Manila.

BRIGHTENING will not alone preserve tools from rust. If gone over with an oil rag and put in a box containing whiting, covering them with it, they should be kept from rusting.

FRICTION is the resistance occasioned to the motion of a body when pressed upon the surface of another body which does not partake of its motion.

WATER absorbs more heat than any other liquid, due to the fact that it contains no carbon.

## HORTICULTURE.

### Gen. Chipman's Conclusions on the Olive.

In the PACIFIC RURAL PRESS of December 14 we gave an outline of Gen. Chipman's masterly investigation into the olive situation in this State, the voluminous data of which will, we hope, soon be published by the State Board of Trade. At that time we promised to give Gen. Chipman's conclusions. They are as follows:

Having presented the evidence in the case, we are now prepared for deductions and a verdict. I have given you the testimony of about fifty witnesses, widely scattered over the State, nearly all of them growers and most of them manufacturers of oil or pickles, or both. The time embraced reaches back a considerable period of years with experiences and observations brought down to date. Upon some points there is a conflict in the evidence; on others an entire agreement, but the evidence in its entirety largely preponderates in favor of the industry. When I began the investigation my mind was unfavorably prejudiced; my own experience and observations had raised a most serious doubt as to whether I should dig up my forty-acre orchard of Picholines, or graft them to some other variety. This investigation has determined the question, and I shall graft and not dig up my trees. Let us briefly analyze the evidence and put the result in concrete form:

FIRST, the OLIVE TREES.—It may be and is successfully grown in nearly every county from San Diego to Shasta below 2000-foot elevation, and even at that or greater I believe orchards are thriving. It grows equally well in all kinds of soil, the yield and quality of the fruit of course dependent on the fertility and adaptability of the soil, as must be obvious. The tree is not subject to nearly so many of so serious enemies, insects or diseases, as the trees of the Old World. The chief enemy, the black scale, is readily overcome, and this insect is not particularly troublesome in the dry, hot atmosphere of the interior. So far as we know, the olive knot, the most dangerous enemy apparently now confronting us, is found only on foreign varieties and has never been found on the Mission, and almost the universal opinion is that the Mission is the best all around variety for all purposes, irrespective of its probable immunity from tuberculosis. The statistics I have given you show that the yield per acre and the per cent of oil in the olive are greater here than in Europe. Our methods of orchard culture and of oil manufacturing are better and will bring a tree into bearing sooner than is done in Europe.

SECOND, OLIVE OIL.—There is entire agreement that the chief impediment to profitable oil making lies in the fact that adulterated oils are sold with labels falsely designating them as pure olive oil. I have shown you that the producers abroad are contending with the same unfair and fraudulent competition. I have shown you that in this State the law gives us ample protection and that it is our fault that here, at least, we have not extirpated cotton seed oil and adulterated compounds put on the market as olive oil. How can we consistently ask other States, or Congress, to enact restrictive legislation similar to our own, where we neglect or refuse to enforce the laws we have here for our protection?

PICKLED OLIVES.—I think it no unwarranted deduction from the evidence that there is a wide market for pickled olives, especially ripe pickled olives, at remunerative prices to grower and manufacturer. Here again the failures are traceable to ourselves. Is it too much to say that if A and B can and are paying good prices for olives, and pickling them and selling them at a profit, that others may do so? A business should be judged by its intelligent successes, not its ignorant failures. There is no reason for the existing condition I have shown you, that in Los Angeles the manufacturer is paying but \$30 and \$40 a ton for olives for all purposes, while at Oroville he is paying \$40 for oil olives and \$75 for pickling olives. The Oroville manufacturer assures me he can do well and pay these prices. There is something out of joint at Los Angeles. I am not surprised that the growers there have formed an association for self-protection. Pickling both green and ripe olives, and, indeed, the manufacture of oil is an art.

THE MARKET.—There is also connected with that branch of the industry the mercantile faculty of finding a market. Is it to be supposed that each individual grower in this State, without previous experience and without the knowledge how best to follow his fruit in all its stages, from the tree to the consumer in other States, can, single handed, be entirely successful? It is quite probable that we may have to come to some such course as has been suggested by some of my correspondents and establish large plants in the several olive districts to handle the fruit either as an independent business or by the co-operation of the growers. Nevertheless, I have given you evidence that at least two women are growing olives and pickling them and selling them at a satisfactory profit; and some men are doing equally well. The evidence is that in pickling olives the failures are attributable to ourselves, as usual.

We have not all of us learned the art; we cannot give the ripe pickled olive the keeping quality. Some of us glut the home market with rubbish, and few of us have given the subject the careful and thoughtful attention and consideration it demands. We have gone headlong into a business we know nothing about, and have expected that by some sort of inspiration our ignorance would be superseded by wisdom; and now we are seeking to shift all the responsibility for individual failure on the American people, because they fail to give us rush orders for our oil and pickles. Neither the gods nor the American people are looking around to help those who will not help themselves.

In 1897 we imported 942,598 gallons of so-called olive oil. Notwithstanding Mr. Cooper's estimate of the possible output of all the trees now planted, it will be a long time before we produce this quantity of oil, and when we do, if it is of good quality and is kept pure, we have the world for a market.

According to Mr. Cooper's estimate, which I think excessive, allowing 100 trees to the acre, we have 25,000 acres in olives. I have shown you that in two districts of France there are 150,000 acres. In Tuscany alone there are 270,000 acres, and many times this acreage in other parts of Italy, where the total output of oil is stated to reach 90,000,000 gallons. When you consider the production of Spain and other olive countries and that less than a million gallons find their way to the United States it seems to me we can, with reasonable hope of ultimate success, continue to present the olive industry as one of the many attractions to California.

PROTECTING PURE OLIVE OIL.—The olive growers of this State have held three general conventions—the last, I believe, in July, 1893. At this convention some valuable facts were brought out which growers seem to have entirely forgotten. The question of adulterated oils was thoroughly threshed out and everything we now know was known then. The act of March 23, 1893, was in force. President Cooper urged that some procedure for the enforcement of the law be agreed upon and not allow it to remain a dead letter. In 1897 a Pure Food Congress assembled in San Francisco where the general subject of food adulterations, including olive oil, was exploited—on paper. For eight years the olive growers have had an effective weapon in their hands, but have not used it. If there has been one single prosecution under the law I do not know it. Mr. Lelong stated to the Congress in 1897 that he had found a number of brands of spurious olive oil manufactured here, under our very noses, in San Francisco; that Professor Rising and he had submitted them to tests and the great majority contained no olive oil whatever. He presented ample evidence to convict the violators of the law; and yet, with the means at hand to put a stop to the fraud and, at least in this State, to protect the olive oil industry against what all agree in declaring to be its only impediment to success, the olive grower has for eight years supinely contented himself with cursing the rascals and villains, as he calls them, and now insists that the industry is a failure. If the truth were known you would find olive growers who make no oil buying the very adulterations they condemn the grocers for selling.

The law makes it the duty of the State Board of Horticulture and the State Analyst to enforce its provisions. But it is also the duty of the prosecuting attorney of any county to act in enforcing the law as it is his duty to see to the enforcement of any other criminal statutes upon information presented to him. There is not an olive grower in the State who, if some known person should steal from him a case of oil, would not rush off to the district attorney and make complaint and follow up the prosecution to a trial before a jury, no matter what it cost. And yet a small army of growers are complaining that their business is being destroyed, their property practically stolen from them by fraudulent practices, and they make no effort to arrest either the fraud or its perpetrators. Is it not about time for the growers to cease cursing and to commence acting? Why not give a little attention to fumigating and eradicating the black scale that has fastened itself on the market? Let us see if there is not some power that will enforce adulterants out of our oil, or compel them to wear a placard that will advertise their fraudulent use. The Act of 1893 is an ample weapon of offense and defense. Let us draw it from its sheath, where it has rusted for these many years, and see if there is not courage enough left in us to use it. I am informed that pure food laws exist in other States of which we could take advantage.

THE quantity of sodium delivered to the sea every year by rivers is about 160,000,000 tons; but the quantity of sodium which the sea contains is at least ninety millions of times greater than this. The period of time during which rivers have been carrying sodium into the sea must therefore be about ninety millions of years.

A 6 H. P. GAS ENGINE will use about 18 cubic feet illuminating gas per hour for full load, gas and air inlet being correctly adjusted. A good governor on the gas inlet will save waste.

PURE WATER possesses high resistance to an electric current, but the slightest acid admixture reduces such resistance.



## Agricultural Review.

### BUTTE.

**FERTILIZING ORANGE TREES.**—Gridley Herald: An experiment in the way of fertilizers is to be tried on the Hearst orange grove at Palermo and Supt. Moncure now has a force of men engaged gathering the fertilizer, which is nothing else than chicken manure. It is proposed to make a practical experiment on about one acre of the grove, it being the idea to put about two tons of the fertilizer on one acre of ground. It will then be given the same attention as the rest of the grove and results awaited in the next crop.

**WINTER SOWING COMING INTO FAVOR.**—Gridley Herald: In spite of the fact that wheat is low and that many claim its production to be an unprofitable business, an unusually large number of farmers in this vicinity are preparing to do a big lot of winter plowing and sowing. If the weather develops favorably there will be many fields winter sown, which bore a crop during the last summer.

**BIG CATTLE SALE.**—Reyman & Evans, the proprietors of the Ord ranch, have sold 1000 head of beef steers to the Western Meat Co. of San Francisco. The cattle are to be delivered at intervals during the winter. A short time ago this same firm sold 700 cows to H. Moffitt and a portion of them has been delivered. This is the largest deal in cattle made in this section for a number of years.

### MERCED.

**LARGE ACREAGE SOWN TO WHEAT.**—Merced Sun: During the week several local sales of wheat were made at 90 cents, clear of warehouse charges, choice bringing a little in advance of that figure. Seeding is progressing nicely, a large acreage of wheat having been put in. Barley sowing is now beginning. The cold weather is benefiting the grain by retarding the growth, thus giving the roots a chance to strengthen. The cold weather of late has interfered with early morning plowing.

### MONTEREY.

**PEACHES IN DECEMBER.**—Salinas Index: In the garden of John Hansen is a tree at this writing (December 16th) laden with beautiful ripe clingstone peaches, the second crop it has borne this year. The peaches are of normal size and delicious to the taste.

### NAPA.

**TRANSFER OF RANCH PROPERTY.**—Napa Register: The James H. Goodman Bank of Napa has sold the old Ink place, 3 miles below St. Helena to J. Piper of San Francisco. The farm consists of 123 acres of grain land and good improvements, including twenty acres of resistant vineyard. The price paid was \$10,000.

### ORANGE.

**INCREASED BEAN ACREAGE.**—There were but few beans grown in the Fullerton section previous to last year. Several enterprising farmers on the San Joaquin ranch experimented with the product, and the results were so satisfactory that last spring about 3000 acres, all told, were planted to this product. The yield has been about 600 pounds to the acre. A portion of the crop, however, was injured considerably by heavy rains.

### PLACER.

**CHESTNUTS AND WALNUTS IN THE FOOTHILLS.**—W. G. Huhley in Golfax Sentinel: Last week J. F. Brown, of Golfax, shipped for account of John Bree 250 pounds of chestnuts. Mr. Bree's ranch is on the Auburn road, 3 miles from Grass Valley. The soil and climatic conditions are about the same as that of Golfax. Here is what Mr. Bree says about the chestnuts: "I have five chestnut trees which have been planted about ten years. There are three varieties. Three have borne nuts six years. The largest tree this year yielded 150 pounds, and the five trees over 250 pounds. They have not been cultivated or pruned since planting, but require a deep soil and to be planted at least 50 feet apart. The largest tree has a trunk 3 feet and 10 inches in circumference and its branches have a spread of over 30 feet. The average price for nuts is 10 cents per pound." The soft-shell walnut is also a desirable tree to plant, notably the propreturiens, which "buds out" late in the spring, thereby escaping the frosts. The writer has a tree of this variety in front of his house which measures 3 feet 4 inches at the butt and has borne nuts for the past six years, having been planted in 1890.

### SAN JOAQUIN.

**SQUIRRELS DIE BY THE THOUSANDS.**—Lodi Herald: Druggist Frank Chrisman secured a virus from the East that when used according to directions would create a contagious disease peculiar only to rodents, and that death would result in from

three to nine days. A number of farmers are now testing the exterminator. Twelve days ago Mr. J. Bishopberger placed the virus over a pasture of twenty acres that was almost honeycombed with squirrel holes. At that time there were not less than 350 of the frolicksome chipmunks in the pasture. Yesterday he reported that there was not a squirrel to be seen on any part of the twenty acres. Mr. W. H. Tredway spread the contents of a 50-cent bottle of the virus over 500 acres, and while many deaths resulted he believes that a large number of the squirrels left for other parts, as he found many of them dead miles from where he had set out the poison.

**BIG PUMPKINS.**—Lodi Sentinel: The Langford Colony, east of Acampo, is keeping up its record for fine products. No specialty has ever been made in the pumpkin line, but some fine specimens are produced. A Lodi party was shown one that weighed eighty-eight pounds and was 3 feet long. It was raised on the upland without irrigation.

### SAN LUIS OBISPO.

**APPLES YIELD \$100 AND POTATOES \$200 AN ACRE.**—San Luis Obispo Breeze: The apple growers of Arroyo Grande have been paid during the present year an average of about \$100 per acre for apples on the trees. This means that all such apple orchards are worth at present rates for use of money \$800 to \$1000 per acre. Jack McGlashan has just harvested thirty tons of sugar beets per acre. These were delivered at Oceano at \$4 per ton, or \$120 per acre. The bean growers of Arroyo Grande valley have harvested this year from \$60 to \$120 worth of beans per acre. Some of the walnut trees have produced at the rate of \$200 per acre and some of the berry farms have done quite as well, with not half enough berries to supply the demand. Potatoes are selling at the present time at \$1.25 per cental, which means a yield from good bottom land of from \$100 to \$250 per acre.

### SANTA BARBARA.

**CATTLE DYING OF TEXAS FEVER.**—Weekly Herald: An epidemic of Texas fever is raging through the Goleta valley. Stockmen are fighting it, but it is doing a great deal of damage. There are fears that it will reach the importance of a general calamity. Over twenty head of cattle have already succumbed to the disease. More are sick and the trouble is daily becoming worse. Some of the farmers are of the opinion that a public dipping plant alone will head off the epidemic.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian: The price of apples for driers was up to \$5.50@6 per ton last week. The cold days and nights of the past week have been of great benefit to the packers who have large stocks of apples on hand. The fruit will not melt much in such weather. Apple hauling from some orchards has been in progress this week. It is late for such work, but the crop was so heavy that some of the packers could not house all their fruit earlier.

### SOLANO.

**BLOODED STOCK PAYS.**—Dixon Tribune: J. W. Marshall, a well-known farmer and breeder of blooded stock, who resides near Binghamton, is authority for the statement that it pays to raise blooded stock of any kind. Mr. Marshall has for a number of years secured the finest hogs, horses, cows or other animals he wishes for breeding purposes, and he finds that the practice is paying him well. There is a constant demand for well-bred stock of late, and Mr. Marshall has made quite a reputation for himself among breeders, which is proving most valuable to him at this time. It would be infinitely more profitable to our many farmers who breed only in a limited way to follow Mr. Marshall's example in these matters. It costs no more to keep a good animal and the owner has something worth offering when he wishes to sell.

### SONOMA.

**NEW OLIVE MILL.**—Santa Rosa Republican: A large olive mill has been erected in the old winery on the Grosse estate in Rincon valley and will soon be in operation. The old structure has been transformed into the most modern olive crushing plant on the coast, and machinery has been installed for the oil refining process and crushing. President B. W. Paxton of the Santa Rosa Bank owns the property and in addition to the large crop of olives grown on Rincon Heights he has contracted for many additional tons. It is his intention to produce a superior article of oil, and he expects to crush over 200 tons of olives during the run.

**SUIT OVER SHEEP DYING IN TRANSIT.**—Santa Rosa Press-Democrat: There was a decidedly interesting time in Department 1 of the Superior Court yesterday at

the trial of the action, familiarly known as "the sheep case," brought by Jeff Fine against C. G. Bryant. The plaintiff alleged he went to Oregon to purchase sheep for Mr. Bryant. He purchased 8144 sheep, and, from natural causes and by no negligence of his, 281 of them died en route. In remuneration for his buying of the sheep, the plaintiff alleged Bryant had promised to pay him \$1000, and, in addition to this, the defendant was to pay for all necessary help, expenses, etc. Of the \$1000, Fine said in his complaint he had been paid only \$600 and he sued to recover \$430. The jury, after a brief deliberation, returned a verdict for the plaintiff for \$430—the full amount claimed.

**VINEYARD RESTORATION.**—Sonoma County Farmer: Santa Rosa hank has closed a contract with Mr. R. Wheeler for restoring the phylloxera affected vines of the old Grosse vineyard on Rincon Heights. Mr. Wheeler has a contract also for restoring about 45 acres of B. W. Paxton vineyard at Healdsburg. At the expiration of three years Mr. Wheeler states that under his method of treatment these vines will be restored to their former vigor and bearing. He is to receive \$50 an acre for his work, and is so confident of success that his terms are no pay unless successful.

### SUTTER.

**PROFIT IN COWS.**—The Tudor skimming station continues to flourish and the patrons of the same are well pleased with the returns. The receipts per cow run from \$4 to \$6 per month, and some of the farmers in that section who have increased their herds receive in the neighborhood of \$100 per month for their milk.

**HONEY INDUSTRY INCREASING.**—Sutter Independent: Since the introduction of carpet grass into the tule lands the bee and honey industry in Sutter county has grown rapidly. Four years ago there was no one in the county making a business of raising bees. Now it is estimated that we have 8000 colonies. Tyler Bros. of Nicolaus are said to be the largest bee raisers. They have 1800 colonies.

### TEHAMA.

**BEEF BRINGS GOOD PRICES.**—Red Bluff Sentinel: Alonzo Swain made the best beef sale of the season Monday to S. Fresno, the Vina butcher. Mr. Swain drove in seventeen steers from his ranch on Cottonwood creek. Two were four and the balance were two-year-olds. They averaged 1190 pounds each, or 595 pounds net, and Mr. Swain received 8½ cents a pound, making the average \$50.67 each. This is a big price, but they were a fine lot and had been fed by Mr. Swain.

**THE OLIVE INDUSTRY.**—Red Bluff Cause: Olive growing in Tehama county is making rapid strides. Statistics compiled by the county assessor show that there are 10,490 bearing trees in the county, and this is no doubt short of the actual number. The same statistics show that in new orchards there are 87,472 non-bearing trees, which are coming on.

### TULARE.

**SORGHUM.**—Tulare Register: John Estes has a crop of sugar cane that is immense. It was put in with a drill the first of June and irrigated at once. It has grown nearly as thick as hair on a dog and 10 to 16 feet high, and some of the stalks are as big as one's wrist. He had a curiosity to know how much of that sort of cow feed there was to the acre, and so cut up a square rod of the stuff and drove on to the scales and weighed it, deducting, of course, the weight of the wagon. The load, green and just from the field, weighed 1180 pounds. As there are 160 rods to an acre the yield is at the rate of 94½ tons per acre.

### YOLO.

**FINE OLIVES.**—Yolo Mail: J. A. Harold showed a sample bottle of olives recently that he raised on his place east of town. They were the largest we had ever seen and were beautiful. The trees are of the Sevillano variety and are three years old. From each tree was gathered three gallons of olives. The land on which they were planted was farmed to grain for seventeen consecutive years, and to give three gallons of olives per tree, at three years old, shows that Yolo soil is all right for the production of olives.



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All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of

### Eureka Harness Oil

The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes. Made by STANDARD OIL CO.

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## Caustic Balsam

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The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

## Get Bigger Crops

and still

**Sow Less Seed.**

You can do it if you use the

**CAHOON BROADCAST SEEDER**

really the most practical hand

seeder made. Saves four-fifths of the labor of seeding and one-third the seed.

**Insures a bigger crop because it distributes the seed evenly.**

Any one can use it. Sows 6 to 8 acres per hour. Ask your dealer for it. Send to us for descriptive circulars.

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A handsome Souvenir to intending

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and MUSICAL INSTRUMENT purchasers.

Cut out this advertisement and send it to us with your name and address, telling about what kind of an instrument you would like.

We will mail the Souvenir and Catalogue to you at once.

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5-FOOT. WEIGHT, 300 LBS.

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## THE HOME CIRCLE.

## Uneven Exchange.

My wife has figgered out to me  
In tongue an' black an' white, that she  
Has more to do from sun to sun,  
Than I outside; said she: "I'll run  
Your chores and clean up things to-night,  
While you wash dishes." I'm perlite  
Enough to give my wife full kite,  
An' so prove to her that I'm right,  
So after supper off she went  
An' done the chores; it's no great stent,  
Because I've got things fixed to save  
Most every step and light and shave  
The labor bill; but as for me,  
I tackled them air dishes, ye see!  
An', first send-off I plum forgot  
To keep my water bilin' hot.  
I swum I couldn't get 'em clean;  
I never see things act so mean.  
My wife sat there and gave me rope  
Enough. "Why don't you use some  
soap?"

Says she. My stars, I could have et  
That woman up, I was so het.  
An' so into the night I swashed,  
And, when I thought I'd got 'em washed,  
I found a half a dozen more,  
While wife sat laughing to the core.  
Ez nigh as I could figger out,  
I washed and dried that night about  
Three dozen pieces, multiply  
That figger or a bigger by  
Ten hundred and ninety-five—the meals  
In one year's time—that's how wife feels.  
I tell ye what there's something wrong;  
Our work outside goes like a song.  
We set an' ride an' ride an' ride,  
And all the time our wives inside  
At meaneast han'work toll away  
Like some old tread-mill horse; I say,  
That here's a chance for Edison  
To get the biggest slice of fun  
That ever in man's pocket fell;  
'Electricity is very well,  
But he could beat it slick and clean,  
By washin' dishes by machine.

—Family Fireside.

## Cupid and a Pig.

While the train was nearing Cosycot station, Shepherd read Lydia's note again.

"Dear Walter," it began, "of course we should be glad to have you at Cosycot during your vacation, and I suppose Aunt Elizabeth can put you up. But you will find us both completely busy with a colony of Fresh Air children near by which aunt is taking care of. It is a noble work, and Aunt Elizabeth has interested me in it very much; I can think of nothing else, and have decided to devote my whole life to laboring among the children of the poor, if I am worthy of such a career. I want to tell you this before you make up your mind to come, so that you will understand that I won't see much of you and so that you may expect to find me sobered by a serious purpose. Yours most sincerely, Lydia Farrow."

Shepherd crumpled the paper viciously in his pocket. "Confound Aunt Elizabeth," he grumbled. "Sobered by a serious purpose! That's the old maid's phrase—not Lydia's. Result of reading novels about hospital nurses. The children of the poor must be taken care of—but, hang it all, so must Lydia."

A trap was waiting at the station to convey him to Aunt Elizabeth's cottage and his hostess was waiting on her piazza to greet him. Miss Gibbs was an elderly lady whose figure and bearing looked as much out of place in the country as would the portico of the Fifth Avenue Hotel. No amount of gingham and flannel could rusticize her.

"Dear Lydia left her apologies to you, Mr. Shepherd," said Aunt Gibbs. "She has been forced to absent herself upon an important duty connecting with our children's mission. May I beg you to amuse yourself until she returns? Thank you—so kind of you—my clerical work leaves me little leisure in the afternoon, and later I have an outdoor class in botany."

Shepherd spent a quarter of an hour in a vain attempt to read a magazine, then he flung it down and started at random across the rolling and sunshiny green of the fields. A shadowed lane tempted him for a mile or so, but

when he saw the path running ahead of him into the hot glare of a highway he paused uncertainly.

"Hey, Mr. Shepherd!" called a familiar voice from the fence, and a familiar head and shoulders appeared in the adjacent thicket. Voice, head and shoulders belonged to Cuppy, the newsboy who was accustomed to sell him the morning paper at his office door in New York.

"Hello, Cuppy," said Walter, in great surprise. "Are you up here with the other kids?"

"You bet," assented Cuppy. "The flat is a couple of blocks down the street. Milk an' pie an' chicken—an' sheets fer ter sleep in. Dere's twenty of us. Ter-morrow we has atterleetic sports; I'm the empire."

"Miss Gibbs is very kind to do all this for you."

Cuppy stopped short in his progress out of the bushes.

"Say," he demanded, "this Miss Gibbs—are you wid her?"

"No," replied Shepherd, thoughtfully, "I'm agin her."

"That's right," said the ragged object of Aunt Elizabeth's bounty. "The old lady's all right if she'd only leave us be. What fer does she come round a-lecturin' and puttin' us on the sneak? I'm on the sneak now. She pays the rent fer us, an' we takes off our hats fer that. "But," he concluded with a darkening eye, "she runs a night school out o' doors by daylight and I'm on the sneak. "Miss Farrer, she's the people."

"She is all of that," said Shepherd, feelingly strangely comforted; he wanted to shake the boy's brown hand as they strolled together down the highway. "She is all of that for sure," he added.

"Sure; Miss Farrer's worked fer the gang of us till she's most down an' out. She looks as pale as me mother on a wash day. Does yer know what she's doin' now? Gone up this road a couple er miles after a pig."

"After a what?"

"Ter git a pig—a greased pig fer the atterleetics. The farmer what runs our joint made her chase away to buy one off his brother, who needs the money. I told her I'd go meself 'cause she's so tired, but 'Naw' she says, 'Cuppy, youse must stay fer the botenny.' So she chases erlone, for she says it's her dooty, she says."

Shepherd gave his leg a savage slap with his walking stick.

"Hurry along, Cuppy," he exclaimed. "Perhaps we may meet her. And this is a fine job for Lydia Farrow."

He plowed through the dust doggedly, while Cuppy took to the roadside, dodging among the low bushes and keeping a wary glance over his shoulder for a possible pursuer. Proceeding in this skirmishing order they reached a turn from which could be seen a little bridge, spanning a peaceful brook, and, on the bridge, a girl with a green sun umbrella. She was holding the umbrella over something behind her, and she did not observe the two pedestrians.

"Hey, Miss Farrer," yelled Cuppy. Miss Farrow turned and Shepherd waved his hat.

"Hello, Lydia," said he. What in the world have you got there?"

"I have a pig here," answered the young lady. "I am afraid the pig is overcome by the heat. How do you do, Walter?"

"There's a sight more chance that you are overcome by the heat yourself," retorted Shepherd wrathfully, and, in spite of her protesting gasp, he seized the umbrella and shaded her pretty head with it. The maneuver gave him a chance to shake hands with her, and left the pig exposed in the glow.

"Say, he's a dead one," remarked Cuppy.

The small animal lay apparently moribund on the planking and emitted a feeble wail when Shepherd poked a toe gingerly against his somewhat emaciated flank.

"Oh, dear, what shall we do?" said the girl. "Do you think it is going to die? Auntie is so severe when I fail in my duties."

"Good heavens, Lydia, do you mean to say that a pig more or less—"

"But you don't understand, Walter—I must, must show myself trustworthy in every detail. Aunt Elizabeth says so. She knows a girl who couldn't stay at the Rivington Street mission—that's where I was to go—because they couldn't rely on her to clean milk cans. Do you believe that if we sprinkled water on the poor thing—"

"Let's throw him in the brook," muttered Shepherd between his teeth. "He'd appreciate it, and so would I."

"No, no, no," cried Miss Farrow. "Your handkerchief."

Shepherd gave her one wild look and vaulted over the low railing at the side of the bridge. He soused his handkerchief in the stream, clambered up the bank, and squeezed out the water over the pig, who was reduced by this demonstration to the last extremity of terror. He rolled about, involving himself in the cord around his neck; he squealed; dissolution seemed imminent.

"I don't know much about pigs," said Shepherd, desperate because of the genuine trouble in Lydia's big gray eyes. "Do you Cuppy?"

"Aw, I seen one in Jones' wood, an' say, I think this feller's fakin'. Stan' up, Bill," ordered Cuppy, grabbing the leading line. "Lemme take him along fer yer, Miss Farrer."

"I couldn't let you, Cuppy, really I couldn't," protested Lydia. "Aunt gave me this to do, and every failure counts against me. Besides, you ought to be at botany. Give me the cord." She leaned rather wearily against the railing and contemplated the hot stretch of road. "But I am tired and thirsty," she added.

"What's that place up on the slope?" inquired Shepherd, pointing to the right.

The place was where a rude bench stood under some heavy overhanging trees on the neighboring hillside. The clear water of a spring spouted generously out of a rock close by it, plashing into a pool, and the dark green of the foliage surrounding it made the spot stand out on the knoll like a bower.

"That's the—that's a—why, a spring," faltered Lydia.

"The farmers called it the 'Lovers' Well,'" explained Cuppy.

Miss Farrow blushed slightly. She could not help it; Shepherd was looking straight at her.

"Lydia," said he with stern determination, "you and I are going to walk up there and you shall rest yourself. It is absolutely ridiculous for you so think of promenading through the sun with this beast. Cuppy shall guard the pig. You'll take care of that pig, won't you, Cuppy?"

"Yep," agreed that eager youth. "Come on, Bill."

Shepherd picked up the green umbrella and closed it with a snap.

"But—Aunt Elizabeth," the girl demurred. "She will be angry. She will say I'm not fit for Rivington street."

"I advise you not to introduce those subjects at this moment," said Walter, pulling her hand within the crook of his elbow, in an old-fashioned but an extremely comfortable way. "Here is the path. Goodby, Cuppy."

Cuppy, however, was already invisible in a rapidly moving cloud of dust, from which the indignant squeak of the pig drifted back indistinctly to the lovers' well.

Lydia laid her hat on the bench, and a bashful breeze played with her hair. Shepherd brought her some icy spring water in a pocket drinking cup. They elaborately discussed the mechanism of the cup, and then, after a pause, they talked of others things. Perhaps it is unnecessary to specify the topics; Aunt Elizabeth and Rivington street did not figure importantly among them.

"Let us go back across country," suggested Walter, when it was time.

"Very well," said Miss Farrow. "I think we can find a way along the brook. It will be better than the road."

The way along the brook excelled the road in every particular. It led them through thick woods where in the half light they seemed to be quite alone in the world. But on a ridge which skirted

a cleared hollow Shepherd was reminded to the contrary.

"Look," he whispered, grasping Lydia's arm. This was no effort, because she was close beside him.

"It's the botany class," she answered, and they both peered down through the interlocking leaves.

Miss Gibbs, beneath an incongruous sunbonnet, towered in the center of a circle of awed and perspiring urchins. A swamp lily, evidently the subject of her discourse, nodded dejectedly in her uplifted hand. The botany class did not appear to be interested.

"Let's run," said Shepherd.

"Wait," said Miss Farrow. Don't you hear something coming? Oh, what is it? Oh, what in the world is it?

On the other side of the clearing where the class was in session the bushes were swaying and cracking as if a miniature cyclone were careering through them. Aunt Elizabeth's scholars dispersed and dashed expectantly toward the disturber of scholastic quiet; Miss Gibbs herself remained rigid. Not, however, for long.

"Sho, sho, sho!" cried Aunt Elizabeth, waving the lily at a maddened pig, who came for her at a gait as near to a gallop as pigs achieve. "Sho, sho, sho!"

"Hi!" screamed Cuppy.

"Hey!" howled the botany students, and performed a war dance.

The pig flew between Aunt Elizabeth's feet and there fell prone, panting in extremis, and the lady sat involuntarily at his side. She was speechless when Shepherd assisted her to rise. In the meantime Cuppy and his cohorts had manacled the pig ruthlessly.

"Lydia Farrow," gasped Miss Gibbs, "what does this mean? Are you insane? Are you trying to insult me?"

"Please, ma'am—" began Cuppy.

"Silence! Lydia, did you order this outrage?"

"Stand by the boy anyhow," murmured Shepherd in Miss Farrow's ear.

"Aunt, it was all an accident, and I'm to blame," exclaimed Lydia. "It was not Cuppy's fault, really it wasn't."

"I've endured your incompetence long enough," answered Aunt Elizabeth, leading, somewhat stiffly, the return march to the farmhouse. "I do not see how I can recommend you to dear Miss Stein."

"Who is dear Miss Stein?" asked Shepherd.

"She's the head worker at Rivington street," said the aunt.

"Oh," said Shepherd. "Then it's all very easy," and he smiled at Miss Farrow cheerfully.

"What do you mean?"

"It means, Miss Gibbs, that Lydia and I—"

"Never mind, now," put in the girl, reddening. "Aunt Elizabeth, Walter is anxious to give you lots of money for the Fresh Air farm."

"That is good of him."

"Yes, Miss Gibbs, I think I am bound to."

"Well, I don't see why, although we shall be glad enough to have it," said Aunt Elizabeth, and she turned to regard her charges, straggling along behind and bearing the pig aloft, like a sacrificial victim.

"Shall I tell you why I think I am bound to?" proposed Shepherd. "You see, Lydia and I—"

"I do wish you would wait," Lydia interrupted. "Look at Cuppy. I wonder where he got that name."

"It is a contraction for Cupid," said Shepherd, solemnly.

"Cupid!" sniffed Miss Gibbs. "Cupid!"—N. Y. Independent.

## Diplomacy.

"What have you done about that supposed nihilist?" inquired the Czar.

"I told him, your majesty," replied the chief of police, "that if he did not leave the country in twenty-four hours we would consider him guilty and execute him."

"What! Such leniency is—"

"Pardon me, your majesty! I have made it absolutely impossible for him to secure a passport, and he cannot leave without one."—Catholic Standard and Times.



### A Victim to Philanthropy.

A meditative kitten looked exceedingly distraught,  
Across her furry, furrowed brow were  
lines of deepest thought.  
"How shall I best improve my lives?" I  
heard her, musing, say;  
I've only nine to live—I must not fritter  
them away.

"It is appalling when I think how Tabby  
Tortoise-shell  
Has spent eight lives already, and not one  
of them spent well!  
But I shall plan mine carefully, and make  
them all sublime,  
And so leave noble paw-prints on the shin-  
ing sands of Time.

"I'm such a little kitten, the first life of  
them all  
I'll only chase my tail around and play  
with baby's ball.  
The second I'll be older—and I think it  
would be nice  
Entirely to devote my second life to catch-  
ing mice.

"And then the next one—let me see—yes,  
I am sure the third  
Could be employed with profit learning  
how to catch a bird.  
The fourth I'll roll in catnip, oh, won't  
that be immense!  
The fifth I think I'll yowl away on the  
back garden fence.

"But no—these are my pleasures, and it  
isn't right a bit—  
I know I ought to live my lives for others'  
benefit.  
I'm sure I ought to try the philanthropic  
dodge, and that  
Is awful hard for such a small and igno-  
rant little cat.

"These questions overwhelm me!" She  
drew a shuddering sigh.  
"I'm tired of living my nine lives, I think  
I want to die!"  
And with a sad, despairing moan the kit-  
ten then and there  
Gave up nine ghosts, and once again a cat  
was killed by care.

—Carolyn Wells, in Life.

### The New Handwriting.

If handwriting is an index of charac-  
ter American women are all getting to  
be exactly alike. Every fashionable  
woman now writes the angular English  
hand and others are cultivating it.  
Good form decrees that paper, ink and  
wax must be of a certain style, and  
this, taken in conjunction with the  
similarity of penmanship, makes one  
fashionable woman's letter resemble  
another's almost exactly.

The angular writing possesses one  
merit, that of being easily distinguish-  
able. Contrasted with the fine, light,  
slanting, Italian handwriting that was  
the fashion for women thirty or forty  
years ago the writing of the modern  
woman shows a remarkable change.  
Even ten or fifteen years ago the  
school girl who wrote with a heavy  
black stroke of the pen was considered  
at fault, while extremely light or deli-  
cately shaded Spencerian penmanship  
was commended as perfect. But all  
this is changed nowadays. The blacker  
the writing the more character it is  
supposed to possess, just as the  
sketches of some artists who are lavish  
with their India ink are rated as  
strong. Shading has gone out entirely.

It was quite a fad with some women  
of long ago to cross their four and five-  
page letters of finely traced writing.  
Such a letter to-day would be unde-  
cipherable to modern eyes. There is  
no need for the average woman to  
cross her letters nowadays, as they are  
as brief as possible. The long soulful  
outpourings with pen and ink between  
women friends are no longer indulged  
in. It has been said that the art of  
letter writing has completely died out  
and there are no more love letters of  
the old sort written between betrothed  
couples. Even among women the tele-  
graph and the telephone have done  
much to make letter writing as it used  
to be practiced considered an out-of-  
date accomplishment.

"You came down pretty quick," re-  
marked a spectator to the victim of a  
boiler explosion. "Yes," answered  
the aerial navigator, "I wouldn't have  
been in such a hurry, but there wasn't  
anything up there to sit on."—Chicago  
News.

### In Case of Fire.

Quick, intelligent work is imperative  
when a person's clothing becomes ig-  
nited. Your first move should be to  
get the person at length upon the floor.  
The easiest and safest way to accom-  
plish this is by tripping. Then roll him  
over and over. This alone will go a  
long way toward smothering the flames,  
but at the same time lay hold of a rug,  
coat or anything thing thick, with  
which the operation can be more speed-  
ily and effectually completed. A pail-  
ful of water will answer the purpose,  
perhaps, but do not take even ten sec-  
onds to obtain it. It is of vital import-  
ance that you make use of the nearest  
means. Strive to keep the flames  
away from the upper half of the body,  
for that is the most vulnerable part of  
the human anatomy.

Should your own clothing catch fire,  
it will require all of your courage and  
training to enable you to act rationally.  
The natural and almost overpowering  
impulse is to run. Don't; it only makes  
a bad matter rapidly worse. Lie down  
at once and roll yourself up in anything  
which will assist in smothering the  
flames. Fire has a strong upward ten-  
dency, and it will soon envelop your  
whole body if you remain on your feet.  
The danger of your inhaling the flames  
is also greatly increased, and internal  
burns are pretty uniformly fatal.

To far I have used the masculine pro-  
noun, but all of my directions apply  
with even more force to women. It is  
a sad fact that three-fourths of those  
who suffer from burns belong to the  
fair sex. This is attributable, in a  
large measure, to the inflammable na-  
ture of their dress.—Good Housekeep-  
ing.

### A Day in Bed.

There is no better preventive of ner-  
vous exhaustion than regular, unhur-  
ried muscular exercise. If we could  
moderate our hurry, lessen our worry  
and increase our open-air exercise a  
large proportion of nervous diseases  
would be abolished. For those who  
cannot get a sufficient holiday the best  
substitute is an occasional day in bed.  
Many whose nerves are constantly  
strained in their daily avocation have  
discovered this for themselves.

A Spanish merchant in Barcelona  
told his medical man that he always  
went to bed for two or three days when-  
ever he could be spared from his busi-  
ness, and he laughed at those who spent  
their holidays on toilsome mountains.  
One of the hardest worked women in  
England, who has for many years con-  
ducted a large wholesale business, re-  
tains excellent nerves at an advanced  
age, owing, it is believed, to her habit  
of taking one day a week in bed. If we  
cannot prevent agitation, we ought, if  
possible, to give the nervous system  
time to recover itself between the  
shocks. Even an hour's seclusion after  
a good lunch will deprive a hurried,  
anxious day of much of its injury. The  
nerves can often be overcome by strata-  
gem when they refuse to be controlled  
by strength of will.—Nineteenth Cen-  
tury.

### Keep Growing.

Do not stop studying just because  
you have been graduated. Do not lay  
out so much work for yourself—as most  
graduates do—that you cannot com-  
plete any of it, but resolutely deter-  
mine, at the very outset, that you will  
devote at least a few minutes of the day  
to self-improvement. Do not let a day  
pass without at least a glimpse at a  
good book. Try to treasure up a bit of  
poetry, a helpful maxim or motto, a lit-  
tle history, or something else which will  
exercise the mind so that it will not  
stagnate.

Whatever you do, determine that you  
will keep out of ruts. You have plenty  
of examples about you, of men and  
women who have been graduated with  
as much determination, perhaps, to  
keep up their studies, as you now have,  
and yet have dropped into the worst  
kind of ruts, letting all the beauty and  
poetry die out of their lives.

Many great men, like Darwin, have

been suddenly surprised, in their old age,  
to find that passionate love for poetry,  
for music and for works of art, has  
practically disappeared for lack of ex-  
ercise.

Whatever may be your vocation in  
life, resolve that you will not get into a  
rut; that you will keep growing; that,  
when you retire from the active duties  
of life, you will have something to retire  
to, and not feel utterly lost and alone  
in the world when your regular occupa-  
tion is gone.—Success.

### Awful.

There is a little maiden  
Who has an awful time;  
She has to hurry awfully  
To get to school at nine.

She has an awful teacher,  
Her tasks are awful hard;  
Her playmates are awful rough  
When playing in the yard.

She has an awful kitty  
Who often shows her claws,  
A dog who jumps upon her dress  
With awful muddy paws.

She has a baby sister  
With an awful little nose,  
With awful cunning dimples,  
And such awful little toes.

She has two little brothers,  
And they are awful boys;  
With their awful drums and trumpets  
They make an awful noise.

Do come, I pray thee, common sense,  
Come and this maid defend,  
Or else, I fear, her awful life  
Will have an awful end.

### His Nerve.

He had called on a Fifth Avenue phy-  
sician and reported that he was  
"knocked out generally." As he took  
the prescription he said, "Well, doctor,  
what do I owe you?"

"Two dollars."  
"I'm sorry I can't pay you to-day.  
You won't mind waiting awhile, will  
you?"

"No; that's all right."  
"And, doctor, how much will this  
prescription cost?"

"About one dollar."  
"Say, doc, you couldn't loan me a  
dollar to get it with, could you? I'm  
dead broke."

"Let me look at that prescription  
again," said the physician. He took it,  
examined it, then erased a line.

"I had prescribed something for  
your nerve," he said, "but I see you  
don't need it."—New York Times.

### An Innovation.

"I notice," said Bronco Bob, "that  
you make it a rule at a political gath-  
erin' to have all the speaker's close  
friends and partners lined up on the  
platform with him."

"Yes; he is usually accompanied by  
some distinguished men of his own  
party."

"Well, it's a mighty good idea! In  
Crimson Gulch, when a man has any-  
thing to say he jes' gets up on a keg  
an' takes his chances. But I'll have  
the boys adopt your way. It keeps the  
opposition from makin' a man ridicu-  
lous by comin' up behind an' gittin' the  
drop on him while he is bowin' and  
scrapin' to the folks in front."—Wash-  
ington Star.

### Not Going to Quarrel.

"Why," inquired the New York girl,  
"do you Philadelphia people never eat  
snails?"

"Oh!" answered the Philadelphia  
girl, with the air of one who had heard  
something like it before, "I presume it  
is because snails are so hard to catch."  
—Washington Star.

"WELL, ROLLO, what did you learn  
in school to-day?" "I learned that a  
person who lives to be a hundred years  
old is a centipede."—Detroit Free  
Press.

"OF COURSE, you're glad to have  
school open again, Willie?" "Sure;  
now we can have more fun playing  
hookey."—Indianapolis News.

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### DOMESTIC ECONOMY.

#### Hints to Housekeepers.

Not only the cream but the fruit is  
improved by serving lemon or vanilla  
ice cream in half sections of musk-  
melons.

To rid the house of black ants there  
is, perhaps, no better rule than the old  
and long tried one of brushing thor-  
oughly all the cracks and crevices in-  
fested by insects with a hot solution of  
alum and water. Two pounds of alum  
should be dissolved in three quarts of  
water and allowed to stand until the  
alum is dissolved. It should be boiling  
hot while it is being used. All house-  
hold insects disappear before this treat-  
ment.

Any woman who is nervous should be  
careful how she expends energy. To  
rest should not be an art difficult of ac-  
quirement or one requiring a teacher—  
yet many know very little of it. If you  
are physically tired, a few minutes flat  
on your back is worth, as a means of  
repair, an hour's sitting in a chair, but  
mind that it be flat, not reclining on a  
lounge, or with your spine bent out of  
shape in a deep chair in which your  
weight rests on any part of your body  
except the part intended to support it  
—above all, not in a rocking chair, that  
special trap for the nervous.

Birds in cages are often killed by  
insects. The trouble may generally be  
detected by the bird's restlessness at  
night, and also by the way it plucks at  
its feathers during the day. To ex-  
terminate the parasites, remove the  
bird into another cage and blow a little  
insect powder into its feathers. This  
treatment may have to be repeated  
several times. To purify the cage,  
baking is recommended, but if that be  
not possible, scrub it well with carbolic  
soap and hot water, and when dry  
paint over all the wire holes and crev-  
ices in the woodwork with paraffine oil.  
When the smell has gone off, the bird  
may go back to its cage, but to avoid  
a recurrence of the trouble the paraf-  
fine treatment should be repeated oc-  
casionally, as the cracks and holes in  
the woodwork are the favorite haunts  
of the parasites.

An oculist points out a simple but  
very common error that works a steady  
injury to the eye. Persons writing at a  
desk or working by a window, who use  
the right hand, should be careful that  
the light falls upon their work from the  
left side sufficiently direct to remove  
any chance of casting a shadow on the  
work by the movement of the hand. A  
woman sewing will often seat herself by  
the window or lamp in such a way that  
the shadow of her hand falls constantly  
upon the point in her work at which she  
is using the needle. A left-handed per-  
son should be equally careful from the  
other side. The same authority says  
that the wearing of plain black clothes  
is a strain on the sight. Persons with  
weak eyesight quickly feel this strain  
and should be relieved from it. A plain  
black surface offers no focus to the eye,  
and, therefore, tires it very quickly.  
Figured cloth, though it may be all  
black, is preferable.



## AGRICULTURAL ENGINEER.

## Mountain Roads.

## NUMBER III.

JAMES W. ABBOTT in Year Book U. S. Dept. of Agriculture for 1901.

In laying out a mountain road one can sometimes avoid a snowslide track by crossing to the farther side of the gulch. Sometimes it is possible to put the line so high that the snowslide will always stop beneath it. If a snowslide covers a road, it is rarely practicable to clear it for heavy traffic for months. The accumulation of ice, snow, rocks, trees and debris of all kinds is so enormous, and the cost of removing it during the cold, short days of winter so excessive, that a snowslide generally remains where it falls until nature lends the chief aid in its removal. In roads designed for heavy traffic, it is the wisest economy to avoid snowslides at almost any cost.

Next to snowslides in destructive effect are snowdrifts, due to air currents. These act with remarkable uniformity from year to year. The places where these drifts accumulate in excessive amount can generally be located and avoided by careful attention. Deep ravines almost always catch snow. In a snow region it always pays to go around a point by a side-hill grade in preference to cutting through it.

The track of a waterspout must be carefully noted and an ample waterway provided. These result from currents of air due to physical outlines, and generally recur in the same places. They always leave abundant evidence by which their courses may be located.

Always locate roads on slopes facing south and east in preference to slopes facing north and west. These afford the sun greater power to settle and melt the snow.

A sidehill gives a better road than a creek bottom. It is always better drained and generally has a more solid foundation.

The matter of crossing streams should receive the most careful study. Bridges are costly to build and expensive to maintain. The writer recalls a mountain road that originally crossed the same stream sixteen times in the first 2 miles. This number has been reduced from time to time until now only two crossings remain.

Very steep sidehill slopes and hard rock increase the cost of road building. It is often possible by study to avoid them to a greater or less extent. It was a favorite expression with a very successful man that "Nothing pays like first cost in road building," meaning that money expended in intelligent study

of a location was the most economical item of all the cost. Most problems in road location that at first seem impossible of practical solution can be solved.

**OBJECT OF DRAINAGE.**—In level regions we drain roads to protect their foundations; in the mountains we drain them principally to protect the surface. Water naturally runs off from a slope, and in doing so it must always leave more or less effect. Every mountain road must run through a valley or along a hillside. If in a valley, the surface should have a crown of at least 6 inches, with gutters and ditches and drains just as in properly constructed roads in a level region. In mountain roads on hillsides, on the other hand, a very different practice must be adopted. The outside of the road must be the highest, with the view of conducting the water as quickly as possible toward the inside bank, where it should find a gutter to carry it to the nearest drain. This prevents the water from spilling over and washing away the outside bank, and also has a tendency to keep it from running down in the ruts and enlarging them. There is a vital reason for keeping the outside of the road on hillside grades higher than the inside. There is always a tendency for the wheels of a heavily loaded wagon to slough toward the lower side. This becomes very serious when the road surface is slippery, and terrible accidents have happened. Rain or melting snow always wears down some of the material from the inside bank. If the road surface slopes outward, this debris follows the drainage across the road, continually increasing the slope, sometimes very rapidly in cold weather; hence the roadbed, for the protection of both the bed and the traffic, should be constructed and maintained with an inward slope of at least  $\frac{1}{2}$  inch to the foot. The inside gutter should empty into drains crossing the roadbed diagonally at suitable intervals, determined by the amount of drainage.

**NECESSITY FOR PROPER BATTER.**—The importance of batter in mountain road building seems to be little understood, and correct practice is almost universally ignored. It is very common to see hillside grades constructed as follows: Insecure cribbing with a vertical face, constituting the outside of the roadbed; the inside bank cut as nearly vertical as possible, and three-quarters of the entire width of the road perhaps built of material filled in, the filling generally including all the trash available (boughs, sticks, boulders, etc.), with a covering of such material as the bank affords; width, in such cases, barely sufficient to hold a wagon when the road

is first built. The destructive forces of nature act vigorously on such a roadbed from the start. Ice and water rapidly wear down the inside bank, and the debris falls upon the roadbed. The trash foundation settles and the road sinks, sloping outward. Water finds its way through this loose material and undermines the roadbed, making holes, or invisible death traps. The cribbing settles, rots, and soon disappears altogether. Unless such a road is practically rebuilt in a few years it grows more and more dangerous, and finally becomes absolutely impassable. The above is no fanciful sketch, but an accurate description of practices and conditions to be found almost everywhere in mountain regions.

Cribbing is temporary in character, its use costly, and always to be avoided wherever practicable. When indispensable, it should have a batter not steeper than one horizontal to four vertical. Roads excavated in solid rock should have an inside batter of one horizontal to four vertical. This affords some latitude for projecting loads, which might otherwise be crowded off the road.

Roads excavated in plowing or picking ground should have a batter of one horizontal to one vertical; in other words, the inside bank should have a 45° slope. Where steeper, there is too great injury from ice and water. This batter can always be secured without excessive cost. On sidehill grades made for wagon roads an outside bank made of loose material can generally be depended on to stand permanently at an angle of 40° with the horizon. If made of rock, it will sometimes stand at a steeper angle and sometimes not, depending upon the tendency of the rock to disintegrate, so that it is best to adopt a 40° slope as a basis for estimates. Dry stone retaining walls should be used only where indispensable, and should never be steeper than one horizontal to two vertical.

**WIDTH.**—Cost, amount of traffic, safety and comfort are the factors which must determine the width of a wagon road. Comfort and convenience are, of course, promoted by a double track. Extensive traffic demands it. Safety requires so much of it that teams can pass and never be caught unawares on a single track.

The proper width for double track and heavy teams is 16 feet, while it is possible for them to pass with extra caution on a 14-foot track on a straight road.

For single track and greatest safety a desirable width is 12 feet, while 10 feet is generally safe, and an 8-foot roadbed can be driven over if the inside bank has sufficient batter, so that vehicles will not be crowded off.

(TO BE CONTINUED.)

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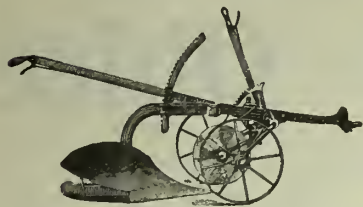
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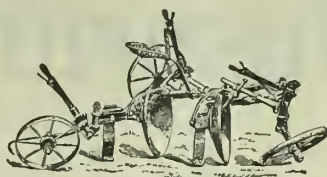
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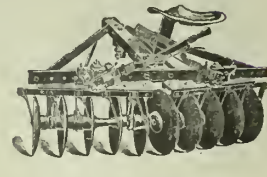
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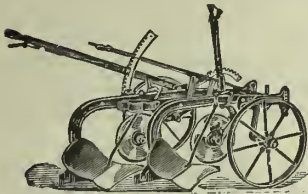
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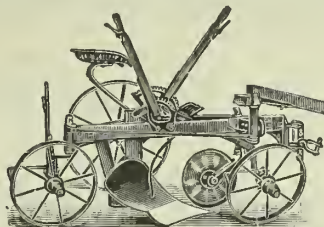
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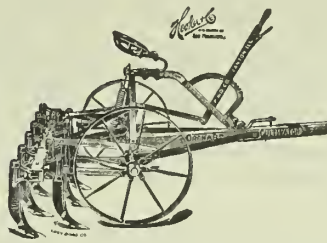
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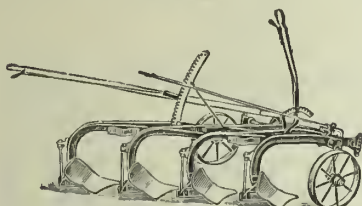
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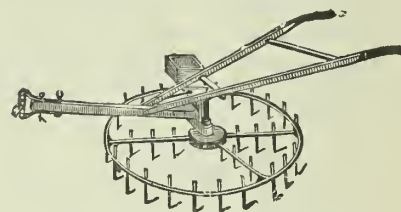
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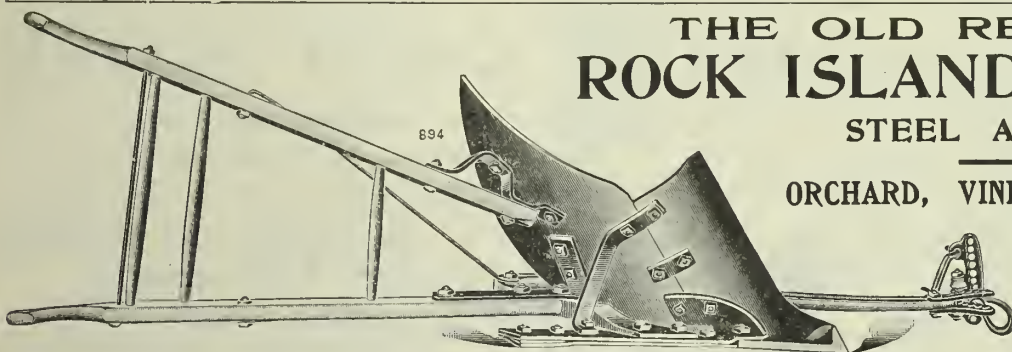


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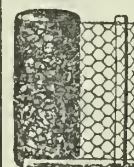
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## THE DAIRY.

## Close of the Dairy School.

TO THE EDITOR:—As you have taken so much interest in the first dairy school of the University of California at Berkeley, you may like to hear how the course closed, for it indicates the cordial relations between the teachers and students and the satisfaction which the latter felt over their experience at Berkeley.

The closing feature was a banquet arranged by the students and to which the instructors were invited. President Cocke of the dairy class of 1901 said that the class had gathered together to celebrate an event of much importance, the management of the dairy course and its effect on the dairy interests of the State. There no longer remains any doubt as to the practicability of the course and its value to the future of the dairy interests of California.

After enjoying an elegant spread the toastmaster called upon Mr. F. H. Hunter, who spoke to the toast, "Our Professors." After telling a few stories applicable to the occasion, he spoke of the opportunity they had enjoyed of being with men who, like Roosevelt, "teach by example." He said that their lives were a constant inspiration, and that the professors manifested a kindly, helpful, cheerful spirit of encouragement always. In closing he said: "I offer our tribute to the services you have rendered to us—thank you heartily and sincerely for it all, and say God bless you and three cheers for you." The cheers were given again and again.

Prof. Anderson responded for the professors with a heart-to-heart talk, commending the class for the work done and saying that the association had been equally as enjoyable to them as to the students. He said in part: "You have now been in attendance upon the first term of the California Dairy School. You have seen what can be done with our present equipment and realize fully the need of more room and more and better equipment if the work is to expand as it should and as the necessities of our State demand. But I would not have your mind stop with the course in creamery instruction and its needs. I would like you to take a larger view of the work that a well-equipped college of agriculture should seek to accomplish if it is to do its duty by the farmers of the State. There should not only be a dairy course, but a herd of cattle connected therewith. This herd should comprise individuals of all the leading breeds of dairy cattle, upon which could be conducted experiments in feeding and breeding. Beef cattle should likewise be represented, and the leading breeds of horses, sheep, swine and poultry. This is what we mean when we speak of a well-equipped department of animal and dairy husbandry, and it is a goal toward which every lover of agricultural education must be working. Such an ideal realized makes it possible for every student to study the leading breeds of live stock from actual specimens, kept under natural, every-day conditions and during the period of his term in college, whether it be for a short or a long term. It means that a farm of several hundred acres is an absolute necessity. It means that much money is needed to furnish land, stock, buildings, equipment and instruction. You should know what are the needs of the University of which you are now members, that your actions may be guided in right directions."

Professors Wickson, Jaffa and Ward followed with appropriate and happy remarks along the same line, all of which were received with great enthusiasm.

Mr. McCorkill then spoke to the toast, "The Cheese Vat," which included the instructor in that department, Mr. Hageman. Mr. McCorkill's remarks regarding the vat were witty and, as to the instructor, very "pat." Instructor Hageman responded, saying that he was a graduate of the first class of the first dairy school in the United States, which was started at

Madison, Wis. He showed the influence of the dairy school, using the Danish butter product as an example, thanked the boys for their courtesy, and ended with a happy story.

Mr. Miller next spoke to the toast, "The Churn," in a pleasing manner, including the instructor in that department. Mr. Severin responded very cleverly with apt and appropriate remarks.

Mr. Stenhouse then spoke of the future of the class. His remarks were of a serio-comic nature, showing great originality and foresight, and were thoroughly enjoyed by all.

President Cocke then spoke flatteringly of the ladies of our class, commending them for the courage displayed, and hoped there would be many more next year, as it was an occupation much more suitable to women than many others they are now engaged in.

Mr. Bingham gave a toast, "To Our State," relating his experiences while in a dream, cleverly bringing in several good things on one of our professors.

Mr. Payen gave a laughable description of the unsanitary dairy, which provoked great merriment.

Mr. Wright, a former graduate of the University of California, and a member of this class, gave an interesting and instructive toast on "California for the Creamerymen." He went over the subject thoroughly in a few well-chosen remarks, giving past statistics of dairy produce in the State, called attention to the shortcomings of the different creamery products, and pointed out just where improvements must be made. He also demonstrated that California could be made the greatest dairy State in the Union, and just where and to what foreign countries we can look for our markets.

The members of the class are as follows:

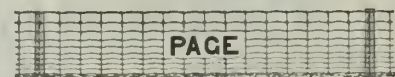
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U. Gydoux.	L. R. Guill.
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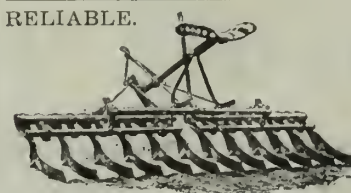


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**BERKSHIRE, POLAND-CHINA & DUDOC HOGS.** Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**P. H. MURPHY,** Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**CHAS. ASHLEY,** Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

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**POULTRY** supplies of all kinds. Send for my new price list and booklet, "HOW TO FEED FOWLS FOR PROFIT." CROLEY, 508 Sacramento St., San Francisco, Cal.

### FANCY POULTRY.

We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Many of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of incubators, wire netting, blooded fowls and poultry appliances generally. Publishers of the Pacific Coast Poultryers' Hand-Book and Guide. Price 40c, postpaid.

**PACIFIC INCUBATOR CO.,**  
1317 Castro Street, Oakland, Cal.

### Cocoanut Oil Cake.

THE BEST FEED FOR STOCK, CHICKENS AND PIGS.

For sale in lots to suit by

**EL DORADO LINSEED OIL WORKS CO.**  
208 California St., San Francisco, Cal.

### NO SPAVINS

The worst possible spavin can be cured in 45 minutes. Ringbones, Curbs and Splints just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

Write today. Ask for pamphlet No. 95 Fleming Bros., Chemists, Union Stock Yds., Chicago.



**DAIRYMEN ARE DELIGHTED** to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars. DRAPER PUBLISHING CO., Chicago, Ills.

### PIGS FOR SALE.

Nine Four-Month Registered Berkshire Pigs. \$10 EACH, OR \$75 FOR THE NINE. E. S. GORDON, Box 13.....SANTA ROSA, CAL.

**FERTILIZERS!**  
**NITRATE OF SODA** supplying Nitrogen or Ammonia,  
**THOMAS' PHOSPHATE POWDER** supplying Phosphoric Acid,  
**MURIATE and SULPHATE OF POTASH** supplying Potash,  
THE THREE ESSENTIAL ELEMENTS OF PLANT FOOD.  
Can be supplied alone or mixed in any proportion to supply whatever deficiency may exist in the soil, thus paying only for what is lacking and necessary to replace.  
**BALFOUR, GUTHRIE & CO.,** 318 CALIFORNIA ST., SAN FRANCISCO.  
ALSO AT FRESNO AND LOS ANGELES.  
WRITE TO THEM FOR PAMPHLETS.

## "BLACKLEGINE"

Pasteur Blackleg Vaccine Quite Ready for Use.

This is in the form of a cord impregnated with the vaccine. Each dose is separate and applied with a special needle. The dose is hitched on to a notch in the needle and then inserted under the skin at the shoulder. The needle is provided with a detachable handle. Vaccination with "Blacklegine" is as rapid and easy as taking a stitch. There is no dissolving, or mixing, or filtering a powder; no injecting or trouble in measuring doses; no expensive syringe outfit.



BLACKLEGINE OUTFIT, SHOWING NEEDLE INSERTED IN HANDLE AND DOSE OF VACCINE ATTACHED READY FOR VACCINATING.

Prices: "Single Blacklegine" (for common stock): No. 1 (ten doses), \$1.50; No. 2 (twenty doses), \$2.50; No. 3 (fifty doses), \$6.00. "Double Blacklegine" (for choice stock) (first lymph and second lymph, applied at an interval of eight days), \$2.00 per packet of ten double doses. Blacklegine Outfit (handle and two needles), 50 cents.

**PASTEUR VACCINE COMPANY,**  
Chicago, New York, Omaha, Kansas City, Ft. Worth, San Francisco.

## DIRECTIONS FOR SUCCESSFUL OLIVE PICKLING



PLACE olives in solution composed, 2 oz. Red Seal Lye to one gallon water. Repeat once or twice to remove tartness. Rinse them thoroughly. Replace lye solution with fresh water. Change water twice daily until, judged by taste, lye is removed from olives.

Replace water with brine composed of 4 oz. salt to 1 gallon water for 7 days. Put in brine of 6 oz. salt to 14 days. Finally put the olives into brine of 15 oz. salt to gallon water.

Vessels used must be clean, odorless, tasteless. White or earthenware recommended. Wooden receptacles scalded in boiling water and soda will do. Use small casks, 5 to 10 gallons preferred. Vat or cask should have movable wooden grating 1 or 2 inches from bottom; a close fitting wooden cover and thick cloth over all. If olives are soft at first, use brine immediately after lye instead of fresh water. Remove any slime or scum.

YOU MUST USE  
**RED-SEAL-LYE**

## EMERY'S BEEF, BLOOD & BONE

FOR POULTRY.

Now is the time to begin to feed our nitrogenous poultry food if you want an abundance of eggs when eggs are high. It pays others to use our goods and it will pay you. Ask your local dealer for Emery's "B. B. & B." Sample and price list free.

**N. OHLANDT & CO., INDIANA AND YOLO STS., SAN FRANCISCO, CAL.**

## HOLSTEIN CATTLE.

SLEEPY HOLLOW RANCH, SAN ANSELMO, MARIN CO., CAL.

ALL THE LEADING FAMILIES OF THE BREED.

Every Sire directly imported from Herds of the Greatest Eastern Breeders.

Large Number of Officially Tested Cows. Bull Calves from Great Producing Dams. Correspondence and personal inspection invited. R. M. HOTALING, 431 Jackson St., San Francisco.



## STATE FAIR VISITORS

knew good pigs when they saw them and our sales were much larger than in any other year, which has reduced our stock to a small number.

We have a few pigs ready to ship and other litters coming on.

We won a large number of premiums which show the character of the herd. We still claim to have the best large herd on the coast and are adding new animals when we find good ones.

Persons wanting good pigs should get in their order early to get a choice of litters.

Correspondence solicited. SESSIONS & CO., 117 E. 23rd St., LOS ANGELES, CAL.

**HUMBOLDT STOCK FARM,**  
JOSEPH MARZEN, PROPRIETOR.  
Breeder of SHORTHORN AND HEREFORD CATTLE.  
Young Stock for Sale. LOVELOCK, NEVADA.

**Fruit.**  
Its quality influences the selling price. Profitable fruit growing insured only when enough actual  
**Potash**  
is in the fertilizer. Neither quantity nor good quality possible without Potash.  
Write for our free books giving details.  
**GERMAN KALI WORKS,**  
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## Southern Pacific.

### SHORT LINE

—FROM THE—  
**EAST to CALIFORNIA.**

**FEWEST MILES**  
—AND—  
**FEWEST HOURS**

Perfectly Conducted Tourists' Excursions from Principal Cities of the East in New Upholstered Tourist Cars.

**SPLENDID LIMITED TRAIN SERVICE** via OGDEN and via NEW ORLEANS.

Ask near SOUTHERN PACIFIC agent for supply of California literature to send friends in the East.

Subscribe for **SUNSET**, a magazine of the border, published solely in the interest of California, \$1.00 per year, any agent.

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Pass. Traffic Mgr.

**T. H. GOODMAN,**  
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**Svea Insurance Co.**  
OF SWEDEN.  
Assets Over \$7,000,000.

The Only Stock Company on the Pacific Coast making a Specialty of

**FARM BUSINESS.**

Notes Accepted on Premiums Payable After Harvest.

Agents in All Principal Towns.

**EDWARD BROWN & SONS,**  
GENERAL AGENTS,  
411-413 California Street,  
SAN FRANCISCO, CAL.

## The Fresno Scraper.

3 1/2-4-5 Foot.



**FRESNO AGRICULTURAL WORKS.**  
FRESNO, CALIFORNIA.



## THE IRRIGATOR.

## The Head of a Dich.

The illustration on this page shows the head flume of the old Amador canal where it takes the water out of one of the branches of the Mokelumne river in Amador Co., Cal. The Amador canal is one of the comparatively few of the old California mountain ditches originally built for placer mining which have survived the closing down of the hydraulic mines. Nevada, Placer, Sierra, Butte and Plumas counties particularly have hundreds of miles of abandoned ditches and broken-down flumes—disappearing monuments of one of the most unique and intense mining activities that the modern world has known—and yet in many cases renewing their youth as irrigating ditches.

Most of these old hydraulic construction works in the localities where most evidence to the eye—the region of the mines—were ditches excavated on high



Head of Amador Canal, South Fork of Tuolumne River, Cal.

mountain slopes, close to the summits, or on top of the broad, flat summits themselves. There was little attempt at fancy construction, just sufficient work being done to get the service. Wherever practicable, the water itself was made to cut its own channel. The flume constructions were generally most prominent at the heads of the lines, at the bottoms of the mountain canyons. Here there is no earth or easily excavated rock, and the slopes are so precipitous that it is difficult even to find footing for the flumes. In some places these have been built on iron brackets set into the face of vertical cliffs. There has been at least one instance in which they were suspended by ropes. There is an occasional instance of a half tunnel being blasted out of a rocky face to make a flume footing.

The condition depicted in the illustration is not uncommon—the canyon at the head, where the water is taken into the flume boxes, so narrow that there was not space for the water flow in the stream and the line of boxes. In this instance this particular difficulty is partly got around by making the head boxes much smaller than the main line and giving them considerably more grade. The loss of grade was of no consequence. The saving of flume construction made by it more than compensated. The small boxes carried a small cross section of water at high velocity, the quantity of flow being sufficient to fill a large ditch when the canyon widened out.

## The Anglo-California Bank, Limited.

Capital Stock Authorized - - \$6,000,000

Paid Up - - \$1,500,000 Surplus, - - \$700,000

Remainder Subject to Call.

London Office: - - - - No. 3 Angel Court.

SAN FRANCISCO OFFICE: - - COR. SANSOME AND PINE

New York Office: Cor. Broad St. and Exchange Place.

Managers in San Francisco, I. STEINHART, P. N. LILIENTHAL.

Bills of Exchange, Commercial and Travelers' Letters of Credit issued, Collections made and Stocks, Bonds and Bullion bought and sold on most favorable terms.

## THE DELAVAL COMPANY

acknowledge that they

## Have Been Lying About Paris Separator Awards.

One of their latest advertisements is headed

## “MORE LYING AS TO PARIS SEPARATOR AWARDS,”

which is one of the most truthful statements they have made lately, as we believe the readers will acknowledge if they try to reconcile some of their statements in the advertisement referred to with some of their previous advertisements.

In the advertisement headed “More Lying as to Paris Separator Awards” they publish what purport to be three “official” statements, dated Stockholm, Sweden. A careful perusal of these will show that they are what the courts call secondary evidence and never accepted by any court if there is primary evidence. The Paris Exposition was not held in Sweden.

Two weeks ago they advertised as follows:

“At the Paris Exposition the DeLaval machines received the Grand Prize, or highest award, \* \* \* being entered and receiving such award in the name of ‘Societe Anonyme Separator,’ which is the French translation of ‘Separator Corporate Company,’ the name of the DeLaval European organization.”

Notice by this advertisement they claimed “Societe Anonyme Separator” to be their European organization, thus acknowledging that no award was given to Aktiebolaget Separator.

But when we proved that “Societe Anonyme Separator” exhibited a Butter Radiator or Butter Extractor, and not a Cream Separator, they lose their tempers again and accuse us of “lying and misrepresentation” and advertise the three statements referred to above in their efforts to prove that the Aktiebolaget Separator did get an award at Paris and claim it as their European organization.

We call special attention to the dates of these statements, viz.: December 5, 1900; April 2, 1901, and April 17, 1901, then ask the reader to bear in mind that it was in the last of November, 1901, that they advertised that the award they claim was given to “Societe Anonyme Separator.” From which it will be seen that they pay no attention to facts or their previous attempts when caught in a trap.

Being cornered on one claim, they abandon it and claim another; cornered again, they go back to their first abandoned claim. We recommend our “would-be” competitors to try once more.

An expert remarks that the DeLaval Company will have to “eat hair” in order to make their statements hang together.

We still say that the official list of awards distributed at Paris did not contain an award to the DeLaval Separator Company or the Aktiebolaget Separator.

To be continued in our next.

The United States Separator still leads the world. To-day it has no equal.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

## THE LIGHTNING FRUIT PICKING BASKET IS THE BOSS!

WILL LAST A LIFE TIME. PRICE, \$1.25 EACH; THREE FOR \$3.25.

For Sale by the LOOMIS FRUIT COMPANY, LOOMIS, PLACER CO., CAL.

Telephone, RED 531.

P. O. BOX 2160.

**J. ZENTNER & CO.,**  
General Commission Merchants,  
Wholesale Dealers in GREEN AND DRIED FRUITS, POTATOES, ONIONS, BEANS,  
WOOL, BUTTER, EGGS, ETC.

**TURKEYS WANTED.** POULTRY AND GAME a Specialty.  
CONSIGNMENTS SOLICITED.  
N. E. CORNER WASHINGTON AND FRONT STS., SAN FRANCISCO, CAL.

**STEEL WHEELS**  
for **FARM WAGONS**  
any size wanted, any width of tire. Hubs to fit any axle. No blacksmith's bills to pay. No tire to reset. Fit your old wagon with low steel wheels with wide tires at low price. Our catalogue tells you how to do it. Address **EMPIRE MFG. CO., Quincy, Ill.**

**STEEL WHEELS**  
—FOR—  
**Farm Wagons.**  
28-30-32 and 34" Wheels with 4 and 5" Tires.  
Make a Good Low Down Truck Out of Your Old Wagon at a Good Low Down Price.

At **BAKER & HAMILTON'S,**  
San Francisco. Sacramento. Los Angeles.

**FRANK DALTON CO.,**  
Shipping and Commission Merchants.  
—DEALERS IN—  
BEANS, POTATOES, GRAIN, DRIED FRUITS, DECIDUOUS AND CITRUS FRUITS.  
Car Lots a Specialty. Send Samples.  
224 CLAY STREET, SAN FRANCISCO.

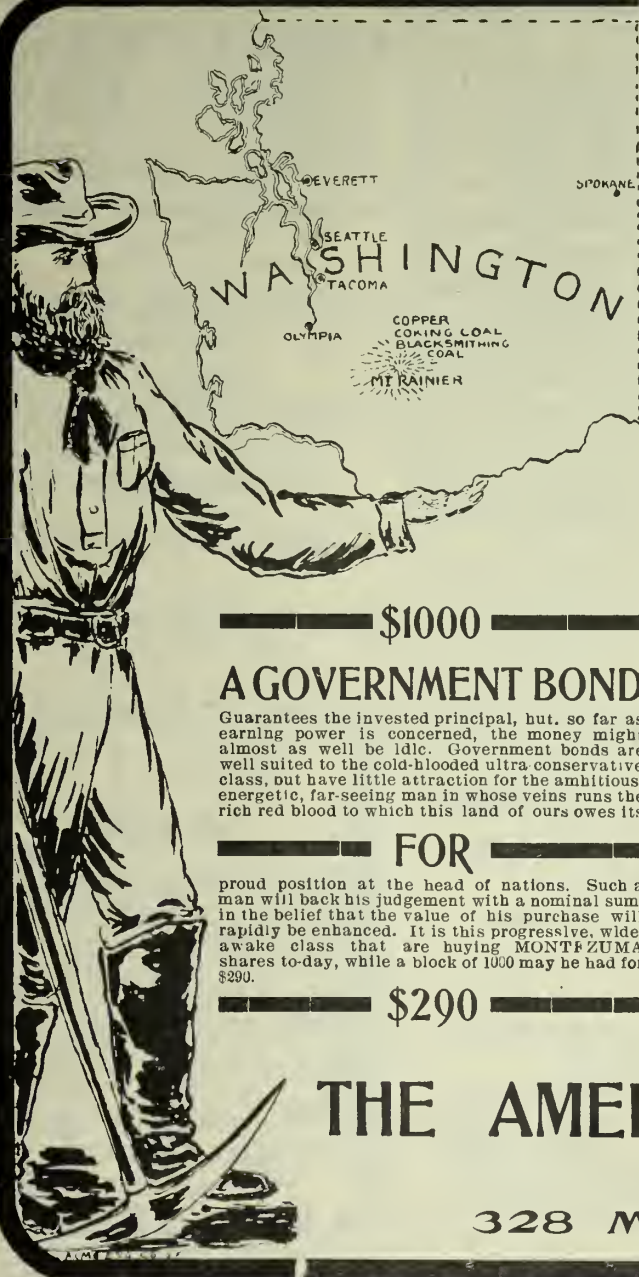
**BAKER'S TRACELESS HARNESS**  
AGENTS WANTED  
DRAFT DIRECT

Best farm and field harness. Used and endorsed by thousands. More than saves its cost every season. Satisfaction guaranteed. Write to-day.  
**B. F. BAKER CO., 215 Main St., Burdett Hills, N. Y.**



**MONARCH**  
**Grubber and Stump Puller.**  
**HOOVER & CO.,**  
16 and 18 Drumm Street, San Francisco.





— \$1000 —

### A GOVERNMENT BOND

Guarantees the invested principal, but, so far as earning power is concerned, the money might almost as well be idle. Government bonds are well suited to the cold-blooded ultra conservative class, but have little attraction for the ambitious, energetic, far-seeing man in whose veins runs the rich red blood to which this land of ours owes its

— FOR —

proud position at the head of nations. Such a man will back his judgment with a nominal sum, in the belief that the value of his purchase will rapidly be enhanced. It is this progressive, wide-awake class that are buying MONTZUMA shares to-day, while a block of 1000 may be had for \$290.

— \$290 —

## THE AMERICAN GUARANTY & TRUST CO.,

SELLING AGENTS.

328 Montgomery St., San Francisco, Cal.

## WASHINGTON'S MINERAL WEALTH,

Consisting of COPPER, GOLD, SILVER and COAL, is just being uncovered. The men who have most carefully investigated the resources of the State appreciate the many advantages it offers to investors, and place their money in the large enterprises of Washington in full confidence of profitable return. Under the stimulus of a great influx of money, coupled with the native energy of its people, and the harmony in which they work, the development of the State will be tremendous, and they who contribute to this development will share its resultant profits.

## MONEY Made in these at any time. MORE MONEY if bought now.

### Montezuma Mining Company

OF WASHINGTON.

### COPPER, COAL, COKE.

The Montezuma Mining Company is a lusty yearling. Its first issue of stock was put on the market in December, 1900; first quarterly dividends paid October 31, 1901; second payable January 31, 1902; regular dividends in larger amount will be paid thereafter from coal and coke alone, for which the demand far exceeds the supply. Dividends already equal 7 per cent on average cost of shares for past year.

### SAFE INVESTMENT

The company is capitalized at \$10,000,000, of which \$8,000,000 is treasury stock, non-assessable, and carries no personal liability. Big copper properties in Tahoma and Carbon River districts, only fifty miles from the sea; 200 acres coking coal lands, eight-foot vein blacksmithing coal (better than Cumberland); 150 men employed; Montezuma postoffice established; bunkers, railway and company's store built. The only copper company operating coal mines and coking ovens—a combination that reduces operating expenses to the lowest notch. Montezuma shares are purely investment; sold on a guarantee; a big, strong, safe company. Some of our clients have sold their holdings of these shares at a profit of 100 to 400 per cent, but the greater number wisely hold on. Shares going to par in the next twelve months. Read the opinions of the shareholders who have visited the mines. Par value \$1.00; offered at 29c cash or 32c on installments; advancing monthly. Write for printed matter. See ore, coal and coke at our office.

### Copper King Mining Syndicate

OF WASHINGTON.

### 65 COPPER CLAIMS.

The Copper King Mining Syndicate was incorporated September 14, 1901, under the laws of Washington, with a capital stock of \$10,000,000, of which \$7,000,000 is treasury stock for development purposes. It has sixty-five claims in the Carbon River district, in Washington, north of and near Mount Rainier. The mines of the district are rich, assays showing \$16 to \$200 in copper and gold, 80 per cent of the values being in copper.

### HONEST SPECULATION

The company is negotiating for coal lands, with excellent prospects of securing a valuable tract. Copper is the main reliance of the company for profits, and development work is going briskly forward during the winter. Machinery is to be installed early in the spring. Engineer's report says: "The company plans to make its mines productive the first year." Prices will be substantially advanced after the first issue of shares is placed. At the price they offer honest speculation, to say the least, with the chances strongly in favor of their becoming, with early development of the district, a profitable holding to the buyer who is not impatient for early returns. Now is the time to buy a block of these shares for a handsome profit, which they will most surely yield. Par value of shares \$1.00; first issue offered for quick subscription at 5c cash or 6c on installments. Ask for prospectus and maps. Ore at our office.

"TIME AND TIDE WAIT FOR NO MAN."

### Educational.

### Get a Job.

Get a good job while you are at it. Don't be satisfied with only

### A DOLLAR A DAY.

Just as well earn two, three, four, five or more dollars. We can show you the way to largely increase your earning power, and at the same time enjoy your life. Your years are few; make the most of them. We educate you by mail at small expense, and having done that will "get the job" for you if you can't get one yourself. Write to us to-day, no matter where you live. We are helping thousands of people on the Pacific coast; we will be p you. Address,

The Pacific School of Correspondence, 328 Montgomery St., San Francisco, Cal.

## GAS CITY Business College,

OF STOCKTON, CAL.

HUMPHREYS & WOLFENBARGER,  
(Successors to C. E. DOAN.)

Best Equipped School on the Coast.

Competent Teachers with Business Experience.

Rates of Living Cheap. Tuition Reasonable.

COMPLETE BUSINESS EDUCATION \$50.

WRITE FOR INFORMATION.

**\$60.00**

Will pay for a

Complete Business Education at the

SAN FRANCISCO Business College.

THE BEST AT ANY PRICE.

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## SPECIALISTS

### SHORTHAND and TYPEWRITING.

Better be master of two branches than an inferior in several.

We make you master of above two branches. Practical experience in outside work given in our office.

MERRILL-MILLER COLLEGE,  
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perfected in Bookkeeping and Accounting. Course unequalled in the U. S.

My system makes you rapid and correct at FIGURES.

### MAIL COURSE.

How you can become a first-class book keeper at your home explained upon application by letter.

S. H. TARR, Expert Accountant,  
855 Market Street, San Francisco, Cal.

Positions Secured for All Graduates.

## CALIFORNIA BUSINESS COLLEGE.

"A THOROUGH SCHOOL."

305 LARKIN ST., R. L. DURHAM,  
San Francisco, Cal. President.

Write for new illustrated 60-page Catalogue, Free.

**\$7000 WILL BUY** 1747 acres substantially improved; farming implements included. An exceptional opportunity for grain and stock raising. For full particulars address H. H. MINER, Le Grand, California.

### The Choicest Body of Reclaimed Marsh Land--- 3660 Acres.

No waste soil. 2800 acres under cultivation; remainder being cultivated. Net rental \$5 to \$7 per acre. One and one-half hours from San Francisco by rail or water. For sale as a whole on easy terms. A long lease might be given to desirable parties.

McAFEE BROTHERS,  
108 Montgomery St., San Francisco.

### BOVEE, TOY & SONNTAG, REAL ESTATE AND INSURANCE AGENTS,

624 Market Street, opposite Palace Hotel,  
SAN FRANCISCO, CAL.

Have FARMS, DAIRY, ORCHARD AND STOCK RANCHES AND CITY PROPERTY

FOR SALE AND EXCHANGE.  
Farms to Rent Loans Negotiated Rents Collected and Large Tracts Subdivided, and a General Commission Business Done.

Send for Our Latest Catalogue.

HALE TRACT SUBDIVISION. Santa Clara Co. Tracts from 10 acres up, in price from \$30 per acre to \$100; 2 1/4 miles from Mt. View, Santa Clara Co. Also highly improved farms in Napa, Sonoma, Alameda and other counties on easy payments.

Bovee, Toy & Sonntag, 624 Market St., S. F., Cal.

## Just Like You.

If you wanted a never failing well of good, pure water, wouldn't you have one drilled large enough and deep enough to tap a strong stream of living water? Well, other people think as you do. They are just like you in this respect. This fact affords a fine business opportunity. Buy one of our



**STAR**  
Drilling Machines

and make such wells for yourself and others. There is more money in it than any business you can get into for the capital invested. We make the most complete line of well drilling machinery and supplies in the country. Send at once for large illustrated catalogue—free.

Star Drilling Machine Co., Akron, Ohio.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying.  
113 FULTON ST., one block west of City Hall,  
SAN FRANCISCO, CAL.

Open All Year. : A. VAN DER NAILLEN, Pres't.  
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.

## GLENN RANCH,

Glenn County, :::: California,

## FOR SALE

In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

CONTRA COSTA COUNTY LAND FOR SALE.  
Send for list. D. J. WEST, Martinez, Cal.



## THE STOCK YARD.

### Beet Molasses and Sawdust as Stock Feed.

The development of our infant beet sugar industry (with its thirty factories that produced 371,000 tons of sugar last year, valued at nearly \$8,000,000) raises the question as to the best means of utilizing the residue of the beets, which, in the European factories, is called "melasse." In the last decade, commencing with August, 1890, the world's production of cane sugar was 2,850,000 tons, against 5,950,000 tons of beet sugar. In the European factories, sugar to the extent of 12% to 13% of the weight is extracted from the beets. Much of the melasse is converted into alcohol, while another method of using it is as an ingredient of animal food, especially in the so-called "Torfmelassefutter," or peat and melasse mixed. The residue of the beets is said to contain about 50% of uncrystallized raw sugar. The European demand for this class of animal food exceeds 75,000 tons yearly.

Mr. Adolph L. Frankenthal, U. S. Consul at Berne, in the course of an interesting letter to the State Department, says that at the patent office in Berlin an application is pending which provides for the utilization of sawdust in combination with melasse as a food for animals. This may savor of the tale of the farmer who applied green goggles to his horse and fed him on sawdust, with the well known result; yet the analytical table of nutritious matter contained in wood that is appended to the patent application is remarkable, when compared with that of straw. Chopped straw is used in Europe in considerable quantities to feed to animals in mixtures, and, according to the analysis, prepared sawdust would be more nourishing than straw. The inventor claims that the observation has frequently been made that animals have a decided liking for young shoots and roots of shrubs, as well as the stems of indian-corn and sunflower stalks, all of which are easily digested. Experiments of long standing have proven that the nutriment contained in the shoots remains the same after they become wood. When certain chemicals—salt and calcareous water—are added to sawdust or ground corn cobs and stalks that have undergone a certain fermenting process, the resultant product is a food for animals that is easily assimilated and digested, and is liked by cattle, horses, sheep and pigs. The valuable properties of this prepared food are based upon the nutritious matter contained in the wood (which is set free by the fermenting process), mixed with a large percentage of melasse. The following table gives the percentage of nutritious matter contained in wood sawdust, as compared with straw:

	Birch.	Poplar.	Alder.	Acacia.
Description. %	%	%	%	%
Albumen...	7.08	8.46	7.67	7.65
Nitrogen...	48.58	45.81	47.76	46.68
Fatty .....	4.58	3.97	3.16	2.8
Wood fiber...	32.25	38.71	32.93	32.59

	Beech.	Pine.	Walnut.	Straw.
Description. %	%	%	%	%
Albumen...	6.2	8.23	1.41	3.8
Nitrogen...	47.59	40.33	37.59	36.4
Fatty .....	2.57	5.19	1.68	1.3
Wood fiber...	30.33	39.27	58.11	39.7

The nutritious matter in stems of indian-corn and sunflower stalks, if prepared, is proportionately larger. It is evident that a very cheap cattle food can be prepared in this manner, to which may be added potato peelings, husks and shells of grains, and from 70% to 80% of melasse, which will be absorbed by the prepared sawdust. The aforementioned "Torfmelasse" contains but from 20% to 25% of melasse. The nourishing qualities of melasse for animals have been known to agriculture, but on account of its slimy condition it could not be properly utilized.

BAKER & HAMILTON of San Francisco, Cal., have issued a trade catalogue, the fifteenth annual, descriptive of the Peerless boiler and engine. The large number of sizes and types adapted to special uses which this firm manufacture are exhaustively described and illustrated in this catalogue, which will be mailed on application to them.

## Sharples "Tubular" Dairy Separators.

Official Report of State Authorities.  
University of Wisconsin—430 lbs per hour; test skim milk... 01  
Conn. Agr. College—927 lbs per hour; test skim milk... 02  
Ohio State University—"Doing good work" test skim milk... 02  
Univ. of Tenn—"Very satisfactory" test skim milk... trace  
N. H. Agr. College—"The boys like it" test skim milk... 01  
Hatch Experiment Station, Mass.—692 lbs per hour; test skim milk... 02  
Kansas State Agr. College—660 lbs per hour; test skim milk... 03  
Pennsylvania Agr. College—"Did very good work. Isakims very clean."  
University of Nebraska—"Runs very light. Doing good work."  
Tuskegee, Ala. Industrial Inst.—"The thoroughness of skimming is remarkable."  
SHARPLES CO., Chicago, Ill. P. M. SHARPLES, West Chester, Pa.

## DIVIDEND NOTICE.

### San Francisco Savings Union.

SAN FRANCISCO SAVINGS UNION, 532 California street, corner Wehh.—For the half year ending with the 31st of December, 1901, a dividend has been declared at the rate per annum of three and forty-two one-hundredths (3 42-100) per cent on term deposits and three (3) per cent on ordinary deposits, free of taxes, payable on and after Thursday, January 2, 1902.

LOVELL WHITE,  
Cashier.

## DIVIDEND NOTICE.

### German Savings and Loan Society.

THE GERMAN SAVINGS AND LOAN SOCIETY, 526 California Street.—For the half year ending with December 31st, 1901, a dividend has been declared at the rate of three (3) per cent per annum on all deposits, free of taxes, payable on and after Thursday, January 2, 1902.

GEORGE TOURNY,  
Secretary.

## DIVIDEND NOTICE.

CALIFORNIA SAFE DEPOSIT AND TRUST Company, corner California and Montgomery Sts.—For the six months ending December 31, 1901, dividends have been declared on Deposits in the Savings Department of this Company, as follows: On Term Deposits at the rate of 3 5-10 per cent per annum, and on Ordinary Deposits at the rate of 3 per cent per annum, free of taxes, and payable on and after Thursday, January 2, 1902. Dividends unclaimed for are added to the principal and bear the same rate of dividend as the principal from and after January 1, 1902.

J. DALZELL BROWN, Manager.

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(no matter where). Exchange if preferred. Great demand for our Coast Lands. We offer many A1 bargains. PLAN FREE. K. GETA CO., Woodland, Calif.

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Blue Gum, Monterey Cypress and Monterey Pine, transplanted in boxes.

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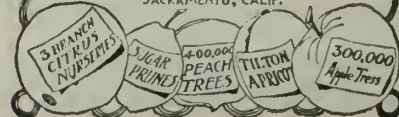
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Ornamental Trees, Roses, Fruit Trees  
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NURSERIES.

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OUR LEADERS NOW.	Grafted Walnuts, -	10c per foot
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FULLERTON,.....CALIFORNIA.



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## THE VETERINARIAN.

### Cattle Distemper.

Dr. N. S. Mayo, veterinarian of the Experiment Station at Manhattan, Kan., reports as follows: Within the past two years occasional reports have come to this department from different parts of the State of what appears to be a contagious disease of cattle that in some respects resembles "lump jaw." During the past few months these reports have been more frequent. Investigation shows the disease to be entirely different from true "lump jaw." The most important differences to be noticed by an ordinary observer are as follows: In cattle distemper the swelling comes on suddenly and always in the region of the throat and appears to be more contagious than true "lump jaw." True "lump jaw" comes on slowly and usually attacks the region of the face or jaws, and the lump or tumor appears to have grown fast to the bone in most cases. Cattle distemper attacks young animals most frequently, but may attack cattle of any age. The first symptom of cattle distemper usually noticed is a swelling of the throat, especially the glands in this region. This swelling appears quite suddenly, often within twenty-four hours, and is usually severe. This is preceded by a slight discharge from the eyes and nose and is associated with a slight fever, the temperature of the animal rising 2° or 3°. As the disease progresses the swellings increase in size and an abscess containing a rather thick, yellow pus or "matter" forms. Sometimes two or three of these abscesses will form about the throat, on the side of the head or along the jaw. These swellings do not affect the bone but occur in the loose tissue and glands. If left alone the abscesses

break and discharge pus, but do not heal readily, often remaining open and running for some time.

**TREATMENT.**—The disease appears to be contagious, but so far experiments do not show in what way. It is not highly contagious. Affected animals should be isolated from the healthy and not allowed to eat or drink from a common receptacle. In the early stages if the swelling is thoroughly rubbed twice daily with a stimulating liniment it will usually "scatter" the swelling so no abscess will form. A liniment composed of equal parts of turpentine and kerosene oil is good. If two ounces of gum camphor is dissolved in half a pint of turpentine and an equal amount of kerosene added the liniment is improved. This should be rubbed on twice daily until the skin begins to get sore. After pus has formed the abscess should be opened freely, washed out with warm water and a strong solution of blue vitriol (sulphate of copper), a tablespoonful dissolved in one-half pint of water. This can be injected once daily for two or three days. Pure tincture of iodine is also good. In some cases putting a small lump of blue vitriol in the cavity works well. If the abscess is not opened early there is a tendency for other abscesses to form.

Nearly all cases recover in a few weeks. Where they do not heal, the cavity can be swabbed out with "butter of antimony" and then the blue vitriol solution used.

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Many of the thousands who weekly find profit in reading the PACIFIC RURAL PRESS doubtless know of others who would find similar profit in every issue of this paper, which for over thirty years has been a household word on this coast.

To such we make the following offer: Send us the name and address of some one not now taking the paper, with \$1 for a six months' trial subscription, and we will send any one so doing, by mail, prepaid, a bound copy of "The Busy Man's Friend," a cloth bound book of 256 pages, a practical digest of facts on points coming up in daily rural life. The book is a worthy one or we would not endorse it.

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### PARIS SEPARATOR AWARDS.

The De Laval Cream Separators received the GRAND PRIZE award at the Paris Exposition, in the name of "SOCIETE ANONYME SEPARATOR," which is the French translation of "AKTIEBOLAGET SEPARATOR," the Swedish name of the De Laval European organization, both names meaning "SHARE-HOLDER'S SEPARATOR COMPANY, LIMITED."

The repeated misrepresentation of the VERMONT FARM MACHINE CO. (manufacturers of the so-called "U. S." separator) in this regard, culminating with the malicious falsehood that no such award was made and that the De Laval Company is guilty of "lying" in so claiming brings the matter to a point where common business self-respect demands that some radical action be taken.

We have, therefore, this day instructed counsel to at once take such legal steps as may be justified and proper in the circumstances against both the VERMONT FARM MACHINE CO. and, where practicable, such papers as may have given advertising publication to these false and libelous statements.

THE DE LAVAL SEPARATOR CO.

New York, Dec. 17, 1901.

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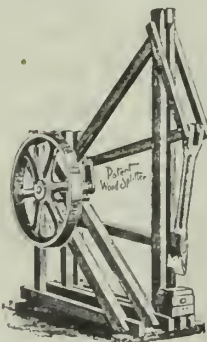
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Portable or Stationary, and does the work of 8 men, with axes.

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To clothe the human form in comely fitting apparel constitutes one of the most important problems in the affairs of life, and has, ever since history recorded the use of garments, been regarded no less intricate than important. Hence the necessity of going to

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**Our friends are among those who have hitherto used foreign and other vaccines.**

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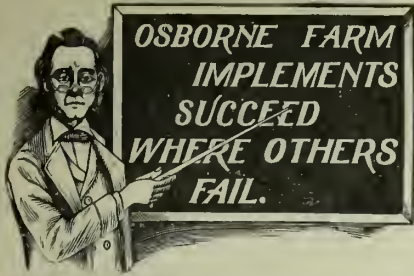
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Write us for booklet on **BLACK LEG** and **ANTHRAX**. They are readable and interesting even if you apprehend no trouble from these diseases.

For references to successful users and for further particulars concerning these and our other products, Address

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ALL COMBINED IN THE ONE HARROW.

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It is not Reversible or Flexible.

A GOOD TOOL AT A LOW PRICE.

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Also made without sulky attachment.

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Adjustable teeth.

FRAME BARS OF HIGH CARBON STEEL.

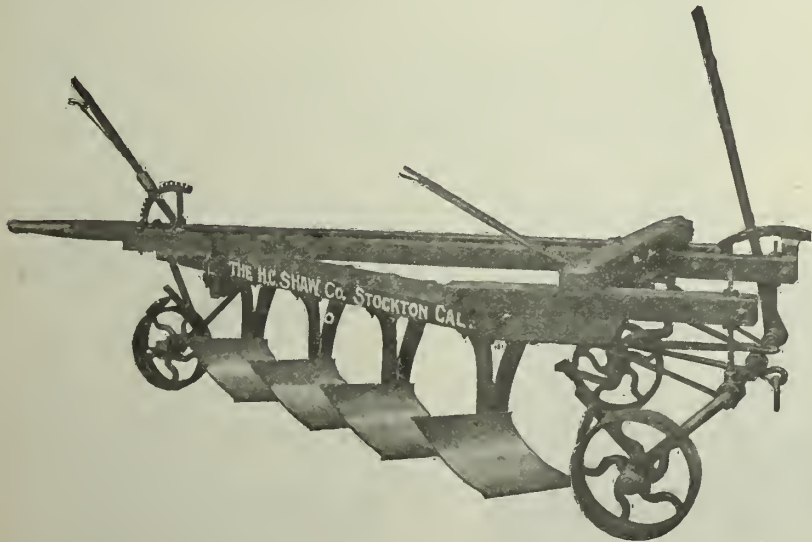
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WRITE FOR CATALOGUE AND PRICES.

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## SHAW'S IMPROVED Reversible Gang Plow.



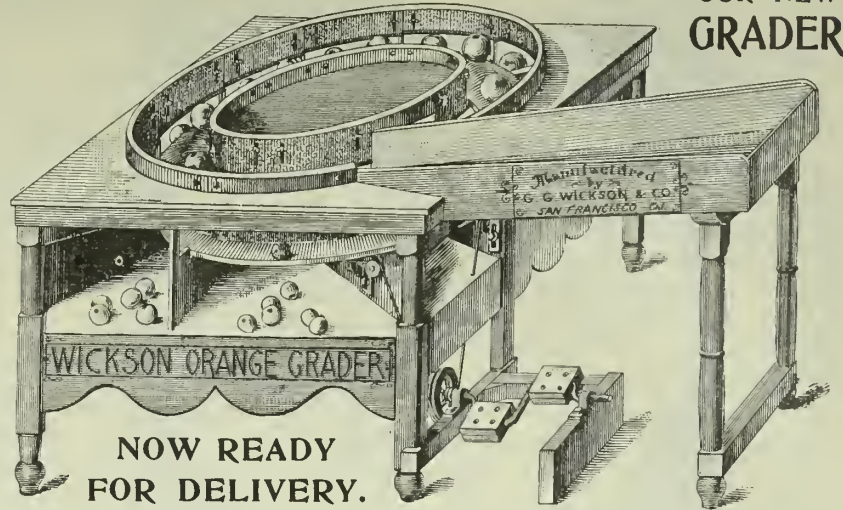
### FEATURES AND ADVANTAGES OF THESE PLOWS ARE:

- OUR PATENT FRONT CRANK AXLE AND DRAFT BAR prevents clogging with trash between front plow and furrow wheel, as the clearance space is much greater.
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- OUR NEW STYLE PATENT SHIFTING LEVER—Adjustment made with the plow in motion; most convenient and effective in use.
- OUR NEW PATENT REVERSIBLE REAR LEVER is adjustable to either the land or furrow. When the land is foul it is necessary to have a lever that can be adjusted to make the wheel run in a furrow, which prevents clogging.

PATENTED AND MANUFACTURED BY

THE H. C. SHAW CO., Stockton, Cal.

## OUR NEW GRADER.



NOW READY  
FOR DELIVERY.

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123 N. MAIN ST., LOS ANGELES, CAL.

PORTER BROTHERS COMPANY,  
Commission Merchants,  
CALIFORNIA PRODUCTS.

SAN FRANCISCO, Dec. 21, 1901.

G. G. WICKSON & Co.  
Gentlemen: Enclosed please find our check in payment for Wicksen Orange Grader shipped by our order of 2nd inst. to our Packing House at Sanger, California.  
Very truly yours,  
PORTER BROTHERS COMPANY.

CALDER'S PACKING HOUSE.

ORANGEVALE, Sacramento Co., Cal., Dec. 16, 1901.

G. G. WICKSON & Co.  
Gentlemen: Enclosed find my check, \$150.00, remitted in payment for Wicksen Orange Grader, Water Motor, Pulleys, etc.  
Yours truly,  
WILLIAM CALDER.

FAIROAKS FRUIT ASSOCIATION.

FAIROAKS, Sacramento Co., Cal., Dec. 19, 1901.

G. G. WICKSON & Co.  
Dear Sirs: Enclosed find check for \$90.00, payment for your bill of December 3rd, for Wicksen Orange Grader.  
Yours truly,  
A. L. BIRCHARD, Treas. F. F. Ass'n.



## 1901 style pianos reduced one hundred dollars

There have been radical changes in the style and finish of cases in the last six months, and we have as a result, about one hundred of the 1901 style pianos on hand.

These must be closed out at once so we have cut the prices from \$100 to \$200 on each piano. Some instruments are marked as low as \$175, nearly \$125 less than formerly marked.

Among the lot are Spielmann, Hamilton, Lester, Byron Mauzy and Sohmer Pianos.

Every piano perfect.

Get one tomorrow before they're all gone—like finding \$100. Cash or easy payments.

Open evenings.

All pianos marked in plain figures.

BYRON MAUZY  
308 Post St., S.F.

DEWEY, STRONG & CO., Patent Solicitors, 330 Market St., San Francisco, Cal.



## New Patents.

DEWEY, STRONG & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 330 Market St., S. F., has official reports of the following U. S. patents issued to Pacific coast inventors:

FOR THE WEEK ENDING DEC. 10, 1901.

688,456.—STREET RAILWAY SWITCH—W. J. Bell, Los Angeles, Cal.  
 688,289.—FIRE ESCAPE—H. H. Boven, Bakersfield, Cal.  
 688,587.—FURNACE DOOR—J. P. Bridgewater, Everett, Wash.  
 688,285.—BOILER FEEDER—C. Cummings, Oakland, Cal.  
 688,622.—CAN HEADING MACHINE—E. E. Forry, S. F.  
 688,727.—CAR TIPPLE—Geske & Miller, Seattle, Wash.  
 688,776.—CARBURETER—C. V. Greenamyer, Los Angeles, Cal.  
 688,636.—MAGAZINE GUN—G. W. Gruver, Priest Valley, Cal.  
 688,415.—MORTISINO MACHINE—W. L. Holman, S. F.  
 688,522.—CANE TRANSPORTATION—A. Horner, Paaulio, H. I.  
 688,526.—CAR COUPLING—W. H. Keen, Acampo, Cal.  
 688,651.—ORE ROASTER—P. Kirk, Kirkland, Wash.  
 688,785.—JOINT LOCK—R. H. Knight, Pasadena, Cal.  
 688,474.—DRIVING GEAR—H. W. Lupton, Los Gatos, Cal.  
 688,660.—GOPHER GUN—O. L. Maxfield, Hollister, Cal.  
 688,747.—HASP LOCK—J. A. McMillen, S. F.  
 688,743.—VEHICLE—R. A. Morton, San Jose, Cal.  
 688,795.—VEHICLE BRAKE—B. W. Scott, San Jose, Cal.  
 688,706.—NUT LOCK—J. M. Sigafus, Porris, Cal.  
 688,356.—MUSIC LEAF TURNER—M. R. Stapp, Aberdeen, Wash.  
 688,802.—AMALGAMATOR—S. A. West, S. F.  
 688,566.—ROTARY ENGINE—S. M. Williams, S. F.  
 688,454.—CABLE TENSION DEVICE—A. L. Wilson, Seattle, Wash.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

CAN CLEANING MACHINE.—No. 685,000. Oct. 22, 1901. Wm. Munn, San Francisco, Cal., assigned to Alaska Packers' Association, San Francisco. This apparatus is designed to clean cans after they have been filled. The outsides of the cans are sometimes rusted and are often covered with adherent material which prevents their being properly soldered. This apparatus is designed to clean the cans in readiness for soldering, and it consists of a revolving brush, intermittently moving carriers by which the cans are presented and held in contact with the brush and revolved so that the brush will cleanse the parts presented to it.

CANE CULTIVATOR.—No. 684,987. Oct. 22, 1901. Albert Horner, Paaulio, Island of Hawaii, H. T. This invention comprises a cultivator which is especially adapted for use where sugar cane is being raised. It consists of a longitudinal draft bar, a segmental row of teeth attached to the rear of said bar, a coupler at the front end, a projection adjacent to and rearward of and in line with the coupler attached to the draft bar, and upon which the front of the machine is supported as a fulcrum when the rear is to be lifted to clear it of weeds and trash. The peculiar arrangement of the teeth not only tears up the weeds, but gathers them and turns them under the soil when the cultivator is discharged of its load.

CANE HANDLING DEVICES.—No. 684,988. Oct. 22, 1901. Albert Horner, Paaulio, Island of Hawaii, H. T. This invention is designed to collect sugar cane into bundles or packages, and hold them in position for transportation. It consists of a hinged framework so curved as to receive the cane which can be laid into it, and a means for closing up the hinged portion so as to clamp the bundle securely during transportation, and to allow it to be readily discharged at the desired point.

ADJUSTABLE TRACTION DEVICES.—No. 686,085. Nov. 5, 1901. J. H. Kirkpatrick, Utica, Ohio. This invention relates to a traction device for vehicle wheels. It consists of radially slidable plates movable in and out through slots in the wheel rims, and means by which these plates are projected, locked in position while they are moving over the ground and released and retracted while passing over the upper circumference of the wheel, the device acting to hold the wheel in soft or loose ground, and to keep the traction plates measurably clean while in operation.

PACKAGE FOR DRIED FRUIT AND THE LIKE.—No. 685,900. Nov. 5, 1901. W. C. Anderson, San Jose, Cal., assignor to Anderson Prune Dipper Co. This invention is designed for a package for containing dried fruits or other material. It consists of a central ridge or body portion made of pasteboard or other suitable material, and having covers fitting over opposite ends with their rims flush and forming an unbroken exterior surface. One of these covers has a weakened line formed directly in the top extending around the major portion and leaving an indented portion to form a hinge about which the cover may open. A piece of impermeable material may be laid within this cover before the package is permanently closed, and the facing, so-called, of the package may be first put in against this cover, after which the package is filled, and the remaining cover is fitted and sealed by any suitable cement. When the weakened line of the top cover is broken it can be opened without otherwise interfering with the cap, and the space under this cover will serve for the reception of printed matter.

CANE TRANSPORTATION SYSTEM.—No. 688,522. Dec. 10, 1901. A. Horner, Paaulio, Territory of Hawaii. The object of this invention is to furnish a simple economical system for the transportation of cane and the like. It consists of a stationary cable fixed and supported at the end and at intervals along the line, holders dependent from the supports having a limited vertical and lateral movement; pulleys journaled in the holders upon which the cable rests, and means to prevent the cable being thrown off the pulleys. A trolley hook carriage is adapted to travel over the cable by gravitation, and auxiliary arms are provided on the supports upon which the cable may be temporarily shifted to elevate it and form a loading station. A second fixed cable adjacent to the lower terminus of the first cable receives the load at the end of its travel. At any terminus where

it is desired to stop the bundles of cane which are being transported the cables approach near enough to the surface of the ground so that the bundles will come in contact with the ground and slacken the speed, finally stopping them.

MALTING APPARATUS.—No. 685,904. Nov. 5, 1901. B. Berg, San Francisco, Cal. The object of this invention is to prepare malt and the like. It comprises an air-heating furnace, with means for transmitting the air thus heated and preventing the passage of soot and dust. In connection with this are one or more chambers containing the malt, with means for agitating it, and the heated air is delivered into these chambers and properly distributed through the malt. In conjunction with this is a moistening and cooling apparatus so that the temperature can be regulated to any degree of nicety, and after the germination has begun the hot air can be employed to arrest it and prepare the malt for the final steps.

ELASTIC VEHICLE TIRE.—No. 686,825. Nov. 19, 1901. William Morck, Oakland, Cal., one-third assigned to George E. De Golia, same place. This invention consists in the employment of concentric rings, one forming the tread and the other located at a short distance interior thereto. Radially sliding rods extend from the outer rim through the inner, and springs surround the rods between the two rims and by their tension maintain the rims normally approximately concentric with each other. The springs are compressed by weight upon the inner rim through the spokes connecting the hub with said rim, and thus an elastic bearing is at all times had. Rollers or equivalent means for reducing the friction of the sliding rods are suitably connected with the rim.

TREE SUPPORT.—No. 687,529. Nov. 26, 1901. A. A. Hoyt, Watsonville, Cal. This is a device for supporting the limbs of trees to prevent their being broken by weight of fruit. It consists of a wire hook having two members or jaws adapted to engage the limbs and clasp them, and two of these clamps upon opposite sides of the body may be connected together by a rope or wire so that they are practically self-supporting.

TRAVELING SPRAYING APPARATUS.—No. 687,396. Nov. 26, 1901. G. A. and R. F. Dunn, Dinuba, Cal. This device is designed for the purpose of spraying trees and plants with mixtures or solutions which are designed to destroy insects and vermin and to otherwise improve the condition of the plants. It comprises a hollow cylindrical roller journaled in a frame and adapted to contain a solution, pumps mounted upon the frame and connections by which the pumps are driven from the revolving roller, suction pipe connections between the pumps and the interior of the roller agitators so constructed as to revolve within the roller out of contact with the suction pipe and a removable corrugated jacket exterior to the drum to give it proper tractile force and prevent its slipping on soft ground. A supplemental receiving cylinder is employed through which the mixture is pumped under pressure, and from which it is delivered through a suitable exterior filter to the spraying pipes.

CLOD CRUSHERS.—No. 687,961. Dec. 3, 1901. T. J. Hubbell, Watsonville, Cal. Assigned to D. Hubbell and W. H. Ames of same place. This invention relates to an apparatus for crushing and pulverizing clods. It comprises a frame with means for drawing or propelling it over the ground, a series of boards or plates pivoted transversely across the frame and turnable therein, one or more of said plates having knives or cutters projecting downwardly and backwardly therefrom, and others having cultivator teeth similarly projecting while the final plate without teeth carries a seat and is adapted to smooth the surfaces of the ground after the other plates have acted upon it.

GOPHER GUN.—No. 688,660. Dec. 10, 1901. O. L. Maxfield, Hollister, Cal. This invention is designed for the destruction of gophers and similar burrowing pests. It consists of a base with a cylinder thereon and a barrel detachably secured to the cylinder. A spring-pressed firing pin, a rod parallel with and beneath the cylinder and slidable in unison with the firing pin, a trigger pivoted upon the base carrying a counterweight, and means for regulating the oscillation thereof. The latch is pivoted on the end of the sliding rod and a slotted spring plate adapted to hear against the latch so that the latter will assume a vertical position and engage the trigger when the firing pin is drawn backward. When the animal pushes the dirt before him, as is the habit of gophers, the weight upon the trigger will cause the discharge of the gun.

THE first year of the new century is nearly gone: there are ninety-nine years left for improvement. N. W. Ayer & Son, the Philadelphia promoters of advertising, have issued their 1902 calendar, an art work, enhanced in beauty by the tasteful colors of the printer. The twelve sheets containing the dates of the months have a restful dark-green background, the large figures in white catching the eye at a great distance. In each sheet are epigrammatic sentences bearing on the possibilities of business during the year. Though this calendar marks the passing of one year in a hundred, it is in itself one calendar in a thousand for artistic beauty and real usefulness. The demand is always great, and whoever would have a copy should send 25c. before the edition runs low. This is a merely nominal price to cover the cost of printing, handling and postage. Address N. W. Ayer & Son, Chestnut and Eighth streets, Philadelphia.

## The New "Brome" Grass.

This Russian forage grass that has been transplanted to American soil, offers the American stockman a most prolific and nutritious grass and hay that cattle take to and thrive on, and one that can be grown on swampy land or where drought would kill other fine grasses. This and other valuable grains, grasses and vegetables are fully catalogued and described by L. L. May & Co., St. Paul, Minn., who will be glad to reply to all inquiries. See their advertisement elsewhere in this issue.

**SPECIAL!**  
**\$450** Pianos for **\$275**  
 SURPLUS Pianos of a first-class make. For particulars, call on or address  
**BRUENN, 208 Post St., San Francisco.**

**Prune Dip.**  
 "Greenbank" Pure 100% Caustic Potash and 98% Powd. Caustic Soda.  
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 Sole Agents, - No. 123 California Street, SAN FRANCISCO, CAL.

FOUNDED 1864.

# The Bank of California

## San Francisco.

Capital, - - - - - \$2,000,000 00  
 Surplus, - - - - - \$1,000,000 00  
 Undivided Profits, October 1, 1901, - - - - - \$2,851,860 11

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 CHAS. R. BISHOP.....Vice-President  
 THOMAS BROWN.....Cashier  
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Letters of Credit Issued Available in All Parts of the World.

## Statement, October 1, 1901.

## ASSETS:

Loans and Discounts.....	\$10,668,411 53
Bank Premises.....	250,000 00
Other Real Estate.....	292,712 67
Merchandise Letter of Credit Account.....	272,688 78
Other Assets.....	11,085 52
Sundry Stocks and Bonds.....	1,069,506 91
U. S. Bonds.....	\$ 600,000 00
Due from Banks and Bankers.....	3,762,281 52
Money on Hand.....	3,214,655 64
	<b>\$20,141,342 57</b>

## LIABILITIES:

Capital paid in Gold Coin.....	\$2,000,000 00
Reserve Fund.....	1,000,000 00
Profit and Loss.....	2,851,860 11
Dividends Unpaid.....	2,208 00
Acceptances under Letters of Credit.....	348,256 58
Other Liabilities.....	60,041 50
Due Depositors.....	\$11,320,175 63
Due Banks and Bankers.....	2,558,800 75
	<b>\$20,141,342 57</b>



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FOR

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We guarantee the efficiency and durability of our pumps.

BYRON JACKSON MACHINE WORKS, - SAN FRANCISCO, CAL.

## HAYWARD'S PASTE AND LIQUID DIP.

Best and Cheapest on Earth. Agents Everywhere. Positively Prevents and Cures Scab, also Kills Ticks and All Parasites Without Injuring the Sheep.

IF YOUR DEALER DOES NOT KEEP IT, ADDRESS

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ASK YOUR DEALER FOR IT.

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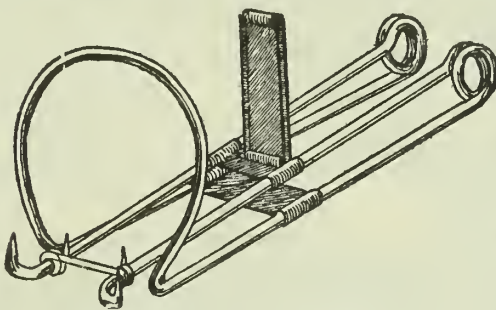
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# PATENTS.

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# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Dec. 24, 1901.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being for No. 2 Red per bushel:

	Dec	May
Wednesday.....	76 1/2 @ 75 1/4	80 1/2 @ 79 3/4
Thursday.....	75 1/2 @ 75 1/4	79 1/2 @ 79 1/4
Friday.....	75 1/2 @ 76 1/4	79 1/2 @ 80 1/4
Saturday.....	76 1/2 @ 77 1/4	80 1/2 @ 81
Monday.....	77 1/2 @ 78 1/4	80 1/2 @ 82 1/4
Tuesday.....	77 1/2 @ 78 1/4	80 1/2 @ 82 1/4

## CHICAGO OAT FUTURES.

Prices of futures on No. 2 White oats per bushel in Chicago were as follows for the week:

	May	July
Wednesday.....	45 1/2 @ 44 1/4	39 1/2 @ 38 1/2
Thursday.....	45 @ 44 1/4	38 1/2 @ 38 1/2
Friday.....	44 1/2 @ 45	38 1/2 @ 38 1/2
Saturday.....	45 1/2 @ 45 1/4	39 1/2 @ 38 1/2
Monday.....	45 1/2 @ 45 1/4	39 @ 39 1/4
Tuesday.....	45 1/2 @ 45 1/4	39 @ 39 1/4

## SAN FRANCISCO WHEAT FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec.	May.
Thursday.....	1 03 @	1 05 1/2 @ 1 06 1/2
Friday.....	1 03 @	1 06 1/2 @ 1 06 1/2
Saturday.....	1 03 1/2 @	1 07 1/2 @
Monday.....	1 04 1/2 @ 1 06 1/2	1 08 @ 1 08 1/2
Tuesday.....	1 04 1/2 @	1 08 @ 1 08 1/2
Wednesday.....	1 04 1/2 @	1 08 @ 1 08 1/2

## WHEAT.

There has been a generally firm tone to the wheat market since last review, but shippers from this center have vigorously opposed paying any material advance over values lately current, and although there are no evidences of their securing any great quantities of wheat, they have managed to prevent for the time being any very radical improvement in quotable rates. The exporting firms have lately had a corner practically on the spot supply of deep-sea ships, and are consequently bearing wheat all in their power for the benefit of freights. If these same shippers had exerted efforts in favor of wheat instead of ships, No. 1 wheat for export might be now commanding close to \$1.25 per cental, instead of remaining near the \$1 mark. The higher price would be bringing to the farmers of this State many thousand of dollars which are now finding their way into the pockets of the owners of foreign vessels engaged in the wheat carrying trade, and the agricultural interests of California and the entire Pacific coast are suffering in consequence. This state of affairs cannot last forever, but not until there is a ship canal across the isthmus can any great or permanent relief be looked for in the matter of ocean freight rates. Most of the wheat now going to importing countries is from America and Russia, and if these two countries should withhold offerings, even if only for a very brief period, prices abroad would certainly speedily and materially stiffen. The market closed strong at the steepest prices of the week. Tuesday and Wednesday the Produce Exchange and Call Board stood adjourned, on account of Christmas.

California Milling.....	1 07 1/2 @ 1 10
Cal. No. 1 shipping, alongside.....	1 05 @ 1 06 1/2
Oregon Valley.....	1 05 @ 1 07 1/2
Washington Blue Stem.....	1 06 @ 1 10
Washington Club.....	1 02 1/2 @ 1 05
Off qualities wheat.....	97 1/2 @ 1 02 1/2

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1900-01.	1901-02.
Liv. quotations.....	65 1/2 @ 65 1/2 @ 65 1/2 @ 65 1/2	65 1/2 @ 65 1/2 @ 65 1/2 @ 65 1/2
Freight rates.....	38 1/2 @—s	35 @ 37 1/2 s
Local market.....	98 1/2 @ 1 01 1/2	1 03 1/2 @ 1 06 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1901, delivery, \$1.03 @ 1.06 1/2.
May, 1902, delivery, \$1.05 1/2 @ 1.08 1/2.
Wednesday, at regular noon session of Call Board, December, 1901, wheat sold at — @ —; May, 1902, — @ —.

## FLOUR.

There has been no change in quotable rates, but the tendency of the market was against the buying interest. Any alterations in quotations for the near future are more apt to be to stiffer than to easier figures. Compared with prices now generally demanded for milling wheat in all sections tributary to this center, flour is going at low prices.

Superfine, lower grades.....	22 25 @ 2 40
Superfine, good to choice.....	2 50 @ 2 75
Country grades, extras.....	3 00 @ 3 25
Choice and extra choice.....	3 25 @ 3 50

Fancy brands, jobbing.....	3 50 @ 3 65
Oregon, Bakers' extra.....	2 75 @ 3 15
Washington, Bakers' extra.....	2 75 @ 3 25

## BARLEY.

Further shipments of this cereal have been made by sailing vessel for Europe the past week. Two lots, aggregating 79,440 centals, went afloat for United Kingdom, and a vessel clearing for London direct took 14,741 centals. While the market is not quotably higher for export and brewing grades, it is firm at current figures, and to purchase freely higher prices would have to be paid. Feed descriptions have not been offering in very heavy quantities, nor have holders been disposed to crowd stock to sale at the expense of making marked concessions to buyers. Speculative trading on Call Board was not heavy, but such transfers as were effected were at figures close to those of preceding week.

Feed, No. 1 to choice.....	78 1/2 @ 80
Feed, fair to good.....	76 1/2 @ 77 1/2
Brewing, No. 1 to choice.....	82 1/2 @ 87 1/2
Chevalier, No. 1 to choice.....	92 1/2 @ 1 00
Chevalier, poor to fair.....	77 1/2 @ 85

## OATS.

Firmness in the oat market is as fully pronounced as at any time the current month, and that values will touch lower levels during the balance of the season is considered very improbable. Some holders are looking for still better prices in the next few months, especially for choico to select quantities. Reds are now most in favor and are bringing relatively the best figures.

White Oats, fancy feed.....	1 30 @ 1 35
White, good to choice.....	1 25 @ 1 30
White, poor to fair.....	1 15 @ 1 22 1/2
Gray, common to choice.....	1 20 @ 1 30
Milling.....	1 25 @ 1 35
Surprise, good to choice.....	1 30 @ 1 35
Black Russian.....	1 05 @ 1 27 1/2
Red.....	1 12 1/2 @ 1 35

## CORN.

Market continues to be lightly stocked with choice to select of any variety, but at the rather stiff prices now ruling, not much is required to satisfy the immediate demand. Poor qualities constitute a large proportion of present offerings, and for this sort there is very little custom, even at seemingly low figures.

Large White, good to choice.....	1 35 @ 1 40
Large Yellow.....	1 30 @ 1 40
Small Yellow.....	1 45 @ 1 55

## RYE.

There are no heavy quantities offering at present and market is moderately firm, although demand at full current figures is by no means active.

Good to choice, new.....	80 @ 82 1/2
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## BUCKWHEAT.

Spot supplies and demand are both of limited proportions. Values quoted are based on figures realized on latest reported transfers.

Good to choice.....	1 70 @ 1 75
---------------------	-------------

## BEANS.

Not much doing in the wholesale market and seldom is during the mid-Winter holiday period. Figures quotable are without noteworthy change from the values ruling for several weeks past. Of course, under undue selling pressure, full quotations could not likely be realized, while on the other hand, with liberal orders on the market, it might be necessary to pay a moderate advance on utmost figure warranted as regular quotations. Included in shipments for the week were 78,650 lbs. Lima beans per sailing vessel for London.

Pea, fair to good, 100 lbs.....	3 25 @ 3 50
Small White, good to choice.....	2 85 @ 3 15
Lady Washington.....	2 75 @ 3 00
Pinks.....	1 80 @ 2 00
Bayos, good to choice.....	2 35 @ 2 50
Reds.....	2 50 @ 2 75
Red Kidney.....	3 50 @ 3 75
Limas, good to choice.....	4 40 @ 4 60
Black-eye Beans.....	3 40 @ 3 65
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 50

## DRIED PEAS.

Quotable values and the general features of the market remain much the same as previously noted. There is very little immediate inquiry for Green or Blue, but Niles are in fair request and choice are being favored with a firm market.

Green Peas, California.....	1 50 @ 2 00
Niles Peas.....	1 75 @ —

## WOOL.

Not much doing in the local wool market, more owing to scarcity of desirable stock than to lack of demand. Bright and free wools are salable to fully as good advantage as at any previous date this season, but the market is practically bare of offerings of this description. There are some seedy and heavy wools still on hand, and these are not recolving any special attention. Prospects are that the coming Spring clip will meet with a good demand and will be favored with a firm market.

## SPRING.

Southern, defective, 7 mos.....	7 @ 8
Oregon Valley, fine.....	14 @ 15
Oregon Valley, coarse to medium.....	12 @ 13
Eastern Oregon, choice.....	11 @ 13
Eastern Oregon, fair to good.....	9 @ 10
Nevada, as to condition.....	10 @ 12

## FALL.

Humboldt and Mendocino.....	11 @ 12
Northern Mountain, free.....	9 @ 10
Northern Mountain defective.....	8 @ 9
Middle Counties.....	8 @ 10
San Joaquin and Plains.....	6 1/2 @ 8 1/2
San Joaquin Lambs.....	7 1/2 @ 9

## HOPS.

The local market is showing very little lito and is not firm, despite the comparatively stiff figures quoted by some dealers, these figures representing little other than asking prices of jobbers. For some fairly choice 9 1/2c. was the utmost named by a dealer the past week, who pretended he wanted the hops in question. A New York authority, under recent date, speaks as follows: "Buying on the Pacific coast has been quite free again this week, and it is understood that a considerable part of the stock purchased is for shipment to England; the range of prices has been from 7c. to 11c., with the exception of one or two lots of exceptionally fine Sonomas which brought 11 1/2c. There has also been fair trading in the interior of this State at from 9c. to 12c. generally, a few very choice growths going higher, and in some sections a little better feeling is noted at the close. The New York City market is a narrow one. A good deal of stock is being delivered to brewers, some of it on new business, and exporters are forwarding considerable lots, though they are not making many fresh purchases; but on the open market there is nothing doing to speak of; dealers getting their supplies direct from the country. The feeling as to values is a little unsettled. It is possible that choice shipping hops might bring 15c., but that is an extreme price; indeed it is quite doubtful that 14 @ 14 1/2c. could be exceeded for the best, while other grades range downward to 10 @ 12c. for common to medium new, and 7 @ 9c. for common to prime old."

Good to choice, 1901 crop.....	10 @ 12 1/2
--------------------------------	-------------

## HAY AND STRAW.

Demand for hay was not particularly active, and although receipts showed some decrease, there was an abundance of stable grades offering to accommodate the immediate demand, prices continuing about as last quoted, but market was not especially firm. Cow hay continued to arrive sparingly and current values on Alfalfa were well sustained. Straw brought much the same figures as last quoted.

Wheat, good to choice.....	9 00 @ 12 00
Wheat and Oat.....	8 50 @ 11 00
Oat.....	6 50 @ 9 50
Barley and Oat.....	6 00 @ 8 00
Barley.....	6 00 @ 7 50
Volunteer.....	5 50 @ 7 00
Alfalfa.....	8 50 @ 10 00
Clover.....	6 00 @ 7 50
Stock.....	5 50 @ 6 50
Compressed.....	9 00 @ 12 00
Straw, 3 bale.....	35 @ 47 1/2

## MILLSTUFFS.

Bran market has been showing more steadiness, under decreased arrivals, but the demand was not active, particularly at full current rates. Middlings and Shorts were in very moderate supply, prices ruling about as previously quoted. Rolled Barley was steadily held, as was also Milled Corn, quotable prices for both remaining without special change.

Bran, 1/2 ton.....	15 50 @ 16 50
Middlings.....	17 50 @ 20 00
Shorts, Oregon.....	16 00 @ 17 00
Barley, Rolled.....	17 50 @ 18 00
Cornmeal.....	31 00 @ 32 00
Cracked Corn.....	30 00 @ 31 00

## SEEDS.

There is not much doing in the kinds quoted herewith, offerings of most descriptions being of rather small compass and spot stocks mainly in few hands. Quotable values throughout remain practically in same position as noted in last review.

	Per c't.
Alfalfa, Cal.....	7 00 @ 7 50
Alfalfa, Utah.....	8 50 @ 10 00
Flax.....	2 50 @ 2 75
Mustard, Yellow.....	3 25 @ 3 50
Mustard, Trieste.....	3 00 @ 3 15
	Per lb.
Canary.....	3 1/2 @ 3 1/4
Rape.....	1 1/2 @ 2 1/4
Hemp.....	3 1/2 @ 3 1/4

## BAGS AND BAGGING.

This market is exceedingly quiet throughout, as is to be expected at the mid-Winter holiday period. There will likely be some noteworthy business in Grain Bag futures at an early date. Values remain quotably as previously noted.

Calcutta Grain Bags, spot.....	7 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	7 @ —
Wool Sacks, 4 lbs.....	31 @ 36
Wool Sacks, 3 1/2 lbs.....	33 @ 31
Fleece Twine.....	8 1/2 @ —
Gunnies.....	— @ —

Bean Bags.....	5 1/2 @ 5 1/2
Fruit Sacks, cotton, three sizes.....	5 1/2 @ 6, 6 1/2
Fruit Sacks, Jute.....	7 @ 7 1/2

## HONEY.

Market for best qualities of both Comb and Extracted is moderately firm at current rates, with no heavy stocks in this center of any description. The lower grades are not eagerly sought after, however, and offerings of this sort draw forth hardly any competitive bidding worth noting from either large or small buyers.

Extracted, White Liquid.....	5 1/2 @ 6
Extracted, Light Amber.....	4 1/2 @ 5
Extracted, Amber.....	4 @ —
White Comb, 1 lb frames.....	11 @ 12 1/2
Amber Comb.....	8 @ 10
Dark Comb.....	6 @ 7

## BEEFWAX.

There is no lack of demand for this product at the figures quoted. Receipts are light, and the quantity on hand in this center is of slim volume.

Good to choice, light, 1 lb.....	26 @ 28
Dark.....	24 @ 26

## LIVE STOCK AND MEATS.

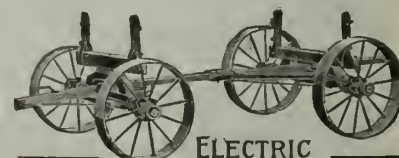
Market is strong throughout, and is particularly so for desirable Beef, with indications favorable for continued firmness for some months to come. Cattle in fine condition are being eagerly sought after, and are not now obtainable in large quantity in any part of the coast. Young Christmas Lamb brought 12 1/2c per lb. Hogs arrived in too light quantity and were too high for any noteworthy packing to be done.

Beef, first quality, dressed, net 1/2 lb.....	7 1/2 @ 8
Beef, second quality.....	7 1/2 @ —
Beef, third quality.....	6 1/2 @ 7
Mutton—ewes, 7 @ 7 1/2c; wethers.....	7 1/2 @ 8
Hogs, hard grain fed, 150 to 250 lbs.....	5 1/2 @ 6
Hogs, small, fat.....	5 1/2 @ 6
Hogs, large, hard, over 250 lbs.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	6 1/2 @ 7
Veal, small, 1/2 lb.....	8 @ 9 1/2
Veal, large, 1/2 lb.....	8 @ 8 1/2
Lamb, spring, 1/2 lb.....	9 @ 9 1/2

## POULTRY.

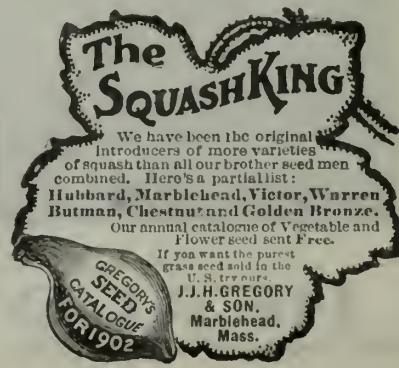
There were fairly liberal arrivals of Eastern poultry, both live and dressed, but receipts from the interior of this State and from all Pacific Coast points were rather light. Dressed Turkeys were in active request, as is invariably the case at Christmas time, and better prices were realized than was thought possible the previous week. A low market was anticipated on account of the importations from the East, and not very many domestic were forwarded for Christmas time. Had a stiff market been expected and domestic crowded in heavily, prices would have ruled low and unsatisfactory. Nothing could well be more uncertain and more difficult to foretell than the Turkey market just prior to the holidays when this fowl is the center of attraction in the poultry trade. The market for other poultry did not show much change from preceding week. Choice Fryers and Broilers, as also Young Ducks and Young Geese in fine condition, brought as a rule good prices, but did not average quite so well as preceding week.

Turkeys, dressed, choice.....	18 @ 21
Turkeys, alive, Hens, 1/2 lb.....	15 @ 16
Turkeys, alive, Gobblers, 1/2 lb.....	14 @ 15
Hens, California, 1/2 dozen.....	4 00 @ 5 00
Roosters, old.....	4 00 @ 4 50
Roosters, young (full-grown).....	4 50 @ 5 00
Fryers.....	4 00 @ 4 50



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Broilers, large.....	3 50	@ 4 00
Broilers, small.....	3 00	@ 3 50
Ducks, old, 1/2 dozen.....	4 50	@ 5 00
Ducks, young, 1/2 dozen.....	5 50	@ 6 00
Geese, 1/2 pair.....	1 50	@ 1 75
Goslings, 1/2 pair.....	2 00	@ 2 25
Pigeons, old, 1/2 dozen.....	1 25	@ —
Pigeons, young.....	1 75	@ 2 00

**BUTTER.**

Additional firmness was developed in the fresh butter market the past week, mainly for choice to select qualities, with receipts of this description not particularly heavy, and the demand good on holiday account. That the market will long remain firm is not probable. There is considerable cold storage butter still on market and prices for the same show no quotable improvement, nor are values likely to harden for any of the carried stock now in store.

Creamery, extras, 1/2 lb.....	25	@ —
Creamery, firsts.....	21	@ —
Creamery, seconds.....	19	@ —
Dairy, select.....	21	@ —
Dairy, firsts.....	18	@ —
Dairy, seconds.....	16	@ —
Mixed store.....	13	@ 14
Creamery in tubs.....	19	@ 21
Pickled Roll, 1/2 lb.....	19	@ 20
Firkin, California, choice to select.....	17	@ 19
Firkin, common to fair.....	16	@ 17

**CHEESE.**

Strictly choice mild-flavored new is not offering in heavy quantity and for this description the market is moderately firm at prevailing values, but of well-matured cheese and also of common new there is more offering than immediate custom can be found for at figures current. The Eastern market is reported in healthy shape, with no special accumulations of desirable grades.

California, fancy flat, new.....	12	@ 12 1/2
California, good to choice.....	10	@ 11
California, fair to good.....	—	@ 10
California, "Young Americas".....	12	@ 13

**EGGS.**

Choice to select fresh were not in heavy supply and were in good request, prices averaging better than preceding week. To command full current figures, however, the eggs had to be uniformly large, with white shell, and in every way suited to the most fastidious trade. Mixed colors and sizes did not meet with a firm market. Pullet eggs are avoided by most buyers, and when mixed in with large eggs spoil the sale of the latter. Stocks in cold storage have been greatly reduced the past few weeks, but a clean-up is not yet in sight.

California, select, large, white and fresh.....	34	@ —
California, select, irregular color & size.....	30	@ 32
California, good to choice store.....	24	@ 27
California, common to fair store.....	—	@ —
Eastern, good to choice.....	—	@ —
Cold Storage.....	18	@ 21

**VEGETABLES.**

Fresh vegetables now on market are coming mainly from Los Angeles section, and desirable qualities are bringing as a rule good prices, such as are usually experienced during the mid-winter holiday season. Choice green peas, string and wax beans sold to especially good advantage. Onions were not in heavy receipt and best qualities were held close to figures of preceding week, but buyers did not take hold freely at top prices.

Beans, String, 1/2 lb.....	12 1/2	@ 15
Beans, Wax, 1/2 lb.....	12 1/2	@ 15
Cabbage, choice garden, 100 lbs.....	50	@ —
Cauliflower, 1/2 dozen.....	40	@ 50
Cucumbers, Bay, 1/2 large box.....	50	@ 75
Egg Plant, Los Angeles, 1/2 lb.....	10	@ 15
Garlic, 1/2 lb.....	2	@ 2 1/2
Mushrooms, 1/2 lb.....	20	@ 25
Onions, Yellow Danver, 1/2 cental.....	1 50	@ 2 00
Peas, Sweet garden, 1/2 lb.....	8	@ 10
Peppers, Green Chile, 1/2 sack.....	35	@ 60
Peppers, Bell, 1/2 box.....	50	@ 70
Rhubarb, 1/2 lb.....	4	@ 6
Squash, Marrowfat, 1/2 ton.....	6 00	@ 9 00
Summer Squash, Bay, 1/2 large box.....	1 25	@ 1 75
Tomatoes, Los Angeles, 1/2 box.....	1 25	@ 2 00

**POTATOES.**

Receipts the current week have been of fair volume, both of California and Oregon potatoes, while the demand was far from brisk and was mainly on local account. Values were maintained at much the same range as current for several weeks preceding, the steadiness being attributable to the fact that spot supplies are mainly in second hands and represent purchases made mostly at figures which do not admit of holders selling materially under current quotations, except at a loss. Sweets were in moderate supply and in fair request, selling at a little advance on figures last quoted.

Burbanks, Salinas, 100 lbs.....	1 30	@ 1 60
River Burbanks in sacks, 1/2 cental.....	90	@ 1 10
Petaluma and Tomales Burbanks.....	1 10	@ 1 30
Oregon Burbanks.....	1 25	@ 1 50
River Reds.....	1 40	@ 1 60
Sweets, Merced, 1/2 cental.....	90	@ 1 10

**The Fruit Market.****FRESH FRUITS.**

Apples of choice to fancy quality continue in limited stock and are in request

at good prices, with no fears entertained of stock of this sort proving excessive any time during the balance of the season. Common qualities are not in heavy supply, but are salable only at low values. Pears are offering out of cold storage, but there are few of any other sort. For choice Winter Nells stiff figures are being asked and are being obtained for limited quantities. Persimmons continued to be offered at quite reasonable figures, but failed to meet with brisk custom. A few Raspberries from Temescal region brought in a retail way 50c. per basket. Coos Bay Cranberries are offering in moderate quantity at \$2.50@2.75 per box.

Apples, fancy, 1/4 4-tier box.....	1 50	@ 2 00
Apples, good to choice, 1/2 50-lb. box.....	1 00	@ 1 50
Apples, common to fair, 1/2 50-lb. box.....	40	@ 75
Apples, Lady, 1/2 box.....	1 25	@ 2 00
Pears, Winter Nells, 1/2 40-lb. box.....	1 50	@ 2 50
Pears, other kinds, 1/2 box.....	50	@ 1 25
Persimmons, 1/2 box.....	25	@ 60

**DRIED FRUITS.**

The advanced rates last quoted on Prunes are being well maintained, the market being firm for new on the 3 1/2c. basis for Santa Clara four sizes and 3c. for the four sizes of outside districts. The movement is of very fair volume for the time of year, and prospects are encouraging for a clean-up at current rates, or perhaps slightly better figures later in the season. Market for Apples is ruling firm at the quotations, especially for best qualities, with very limited quantities now remaining in either first or second hands and not many likely to come forward from any quarter during the balance of the season. Current values on Apricots, Peaches and Plums are being well maintained for good to choice, with business mostly of a jobbing character, there being practically no desirable stock of either sort now offering from producers. There is some inferior dried fruit of various varieties being presented for sale, not in very heavy quantity but in greater amount than there is demand for, such fruit being wholly avoided by the majority of buyers, and when sold goes at such decidedly irregular figures that it is about impossible to give close and accurate quotations for same. For best grades of dried fruits of all varieties, however, the market is in fairly good shape, with little or no likelihood of values ruling lower later on.

**EVAPORATED OR BLEACHED.**

Apricots, Royal, prime.....	7	@ 7 1/2
Apricots, Royal, choice, in sacks, 1/2 lb.....	8	@ 8 1/2
Apricots, Moorpark.....	10	@ 12
Apples, in 50-lb boxes, rings, pressed, fancy.....	7 1/4	@ 7 3/4
Apples, 50-lb boxes, rings, pressed, good to choice.....	5 1/4	@ 6 1/4
Figs, pressed.....	—	@ —
Nectarines, 1/2 lb.....	5	@ 5 1/2
Peaches, unpeeled, fancy.....	6 1/4	@ 7
Peaches, unpeeled, choice.....	5 1/4	@ 6
Peaches, peeled, in boxes.....	12	@ 14
Pears, halves, choice to fancy.....	6	@ 8 1/2
Plums, Red and Black, pitted.....	5 1/4	@ 6 1/4
Plums, White and Yellow.....	5 1/4	@ 6 1/4
Prunes, 4 sizes, in bags, 3@3 1/4c; 50-60s, 4 1/4@4 1/2c; 60-70s, 3 1/2@4c; 70-80s, 3 1/4@3 1/2c; 80-90s, 2 1/2@3c; 120s and less, 2@2 1/4c; these figures for 1901 crop.	—	—

**COMMON SUN-DRIED.**

Apricots.....	6	@ 6 1/2
Apples, sliced.....	3	@ 5
Apples, quartered.....	3 1/2	@ 4 1/2
Figs, Black.....	—	@ —
Figs, White.....	—	@ —
Peaches, unpeeled.....	4 1/4	@ 5 1/4
Pears, prime halves.....	4	@ —
Plums, unpitted, 1/2 lb.....	1 1/4	@ 2 1/4

**RAISINS.**

Supplies now unplaced are of small compass, and not to exceed 25 per cent. of present stocks are of high grade. Market is firm at the revised quotations lately put forth. It is probable that a clean-up of stocks will be effected at an early day. Considering the limited quantities offering, the present movement is fairly active.

Following are the prices for new crop, as fixed by the Fresno Association:

Loose Muscatels—	Per lb.
4-crown.....	5 1/2
3-crown.....	5 1/4
2-crown.....	4 1/2
Seedless Muscatels.....	5
Seedless Sultanas.....	5 1/2
Thompson's Seedless.....	6
Seeded—	
3-crown, 1-lb. carton.....	7
2-crown, 1-lb. carton.....	6 1/2
London Layers, 20-lb. boxes—	
2-crown.....	1 25
3-crown.....	1 35

**CITRUS FRUITS.**

Choice Navel Oranges were in good request on holiday account, some of very superior quality going in a small way at an advance on outside quotation. Two cars of Porterville Navels were disposed of Monday at auction at \$1.25@1.65 per box. The fruit was A1 as to size but not as to ripeness. There will be no more auction sales until after New Year's. Lemons of superior quality were not plentiful and brought slightly better figures than lately current, but common qualities continued in as liberal supply and

slow of sale as previously noted. Limes were in only moderate stock and best qualities were quite steadily held.

Oranges—Navels, 1/2 box.....	1 00	@ 2 00
Seedlings, 1/2 box.....	50	@ 1 00
Tangerines, 1/2 box.....	75	@ 1 00
Lemons—California, select, 1/2 box.....	2 50	@ 3 00
California, good to choice.....	1 50	@ 2 00
California, common to fair.....	75	@ 1 25
Grape Fruit, 1/2 box.....	1 75	@ 3 50
Limes—Mexican, 1/2 box.....	4 00	@ 4 50

**NUTS.**

Stocks of both almonds and walnuts now remaining are mostly in the hands of jobbers, and are being held at much the same figures as for several weeks past, with movement not very brisk. Business doing in peanuts is at generally unchanged rates.

California Almonds, shelled.....	15	@ 18
California Almonds, paper shell, 1/2 lb.....	10	@ 12
California Almonds, soft shell.....	7	@ 9
California Almonds, hard shell.....	5	@ 6
Cal. White Walnuts, No. 1 soft shell.....	8 1/4	@ 9 1/4
Cal. White Walnuts, No. 2 soft shell.....	6 1/4	@ 7 1/4
Cal. White Walnuts, No. 1 hard shell.....	8	@ 9
Cal. White Walnuts, No. 2 hard shell.....	6	@ 7
Peanuts, California, fair to prime.....	4 1/4	@ 5 1/4
Peanuts, Eastern, hand-picked.....	5 1/4	@ 6
Pine Nuts.....	5	@ 6

**WINE.**

The market presents a healthy tone. Not much business is yet reported in new wines, but no trouble will be experienced in securing custom for desirable qualities at comparatively good figures. The quotable range of values for dry wines of this year's vintage may be said to be nominally 20@25c. per gallon wholesale, and it will not be surprising if some very superior qualities go at a little higher range. There is a fair movement outward in blended wines, both by sea and rail. A sailing vessel clearing for London the past week took as part cargo 62,000 gallons and five cases.

**Produce Receipts.**

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.....	104,986	3,192,625
Wheat, centals.....	406,760	4,205,322
Barley, centals.....	107,390	4,145,134
Oats, centals.....	11,430	62,554
Corn, centals.....	4,080	44,853
Rye, centals.....	130	101,175
Beans, sacks.....	7,203	522,643
Potatoes, sacks.....	44,726	781,564
Onions, sacks.....	4,024	140,638
Hay, tons.....	2,425	79,545
Wool, bales.....	185	40,820
Hops, bales.....	467	6,477

**EXPORTS BY SEA.**

FOR THE WEEK.	Since July 1, 1901.	Same time last year.
Flour, 1/2 sacks.....	55,600	2,350,262
Wheat, centals.....	340,242	3,772,194
Barley, centals.....	66,527	3,206,682
Oats, centals.....	—	2,120
Corn, centals.....	—	8,374
Beans, sacks.....	910	17,988
Hay, bales.....	45	5,372
Wool, pounds.....	—	522,721
Hops, pounds.....	9,907	380,777
Honey, cases.....	526	5,434
Potatoes, pack's.....	1,632	24,783

**California Dried Fruit at New York.**

NEW YORK, Dec. 24.—Evaporated apples, common, 6@8 1/4c; prime wire tray, 9@9 1/2c; choice, 9 1/2@9 3/4c; fancy, 10@10 1/2c.

California Dried Fruits.—Fair movement in prunes. Other fruits quiet. Prices without quotable change.

Prunes, 3 1/2@7c.  
Apricots, Royal, 9 1/2@13c; Moorpark, 10@14c.  
Peaches, unpeeled, 7@10 1/2c; peeled, 11@16c.

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